

# AGRICULTURAL OUTLOOK

January-February 1990

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1990 Outlook  
Issue

# AGRICULTURAL OUTLOOK

January-February 1990/AO-160

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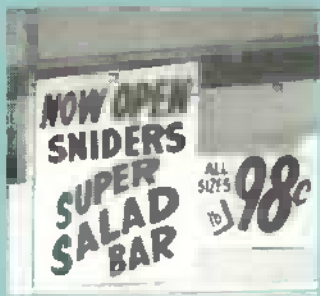
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**The next issue** of Agricultural Outlook (AO-161) is scheduled for mailing on March 7, 1990. If you do not receive AO-161 by March 21, call the managing editor at (202) 786-1494 (be sure to have your mailing label handy). The full text and tables of AO-161 will also be distributed electronically; additional information on this is available at (202) 447-5505.

## In Brief. . . News of 1990 Crop Prospects, Farm Income, Exports, Inputs

The world agricultural outlook calls for rebounding commodity output, rising consumption, and falling stocks of most crops in 1989/90. In 1990, world animal product output will go up slightly, led by much larger U.S. poultry production. Commodity prices will be bolstered by strong demand and declining stocks of most crops, although feed grain and oilseed prices will continue easing from 1988/89's drought-driven levels.

In 1990/91, assuming trend yields, U.S. and foreign production of many crops could rise again, and some stock rebuilding may take place. Farmers will be responding to prices that are likely still to be above predrought levels and to loosened acreage reduction requirements for wheat and cotton in the U.S.

Domestically, this commodity outlook means farmers can look forward to stable incomes in 1990. Farmers' net cash income likely will exceed \$50 billion for the fourth consecutive year, up 2-4 percent from 1989. Net cash income measures the value of commodities sold plus government payments, less cash costs, and includes sales of stocks built up over previous years.

However, net farm income may drop 2-5 percent, to \$44-\$49 billion, as prices continue easing from the spikes caused by the 1988 drought. The lower prices will dampen the value of the fall 1990 harvest.

Even though net farm income is forecast to drop slightly from a year earlier, when adjusted for inflation it would be up more than 50 percent since 1982. Net farm income measures the value of agricultural production plus government payments in a calendar year, less all costs.

In 1990, farmers' inflation-adjusted equity could go up by 1 percent, because current-dollar land values are forecast to rise 4-7 percent. The real rate of return on farm assets probably was 5.9 percent



in 1989, and is expected to be 4-5 percent in 1990. Demand for credit should inch upwards.

USDA expects U.S. agricultural exports in fiscal 1990 to recede 4 percent from a year earlier to \$38 billion; total volume is forecast to edge slightly lower, and prices are expected to weaken moderately.

Wheat export volume is dropping primarily because of the recovery in production abroad, tight supplies in the U.S., and a fall in global wheat trade. In contrast, U.S. high-value exports are expected to set another record, possibly reaching \$17 billion.

U.S. farmers are expected to spend \$119-\$122 billion in 1990 on agricultural inputs, compared with \$121 billion in 1989. Farmers will buy more inputs such as seeds, pesticides, and fertilizer to support an increase in planted area, but declining feed costs will hold down aggregate input expenses. Pesticide prices will continue rising, while fertilizer prices are likely to remain flat. Seed

prices will climb more slowly than in 1989.

In the longer term, on the demand side, the global population is expected to grow more slowly than in the past. However, rising per capita income and resolving the international debt problem likely will make per capita demand grow more rapidly in the 1990's than in the 1980's.

On the supply side, environmental concerns and expanding nonagricultural land uses suggest a lesser rate of growth in agricultural resources. But, productivity growth is not expected to slow, and may even accelerate in the 1990's.

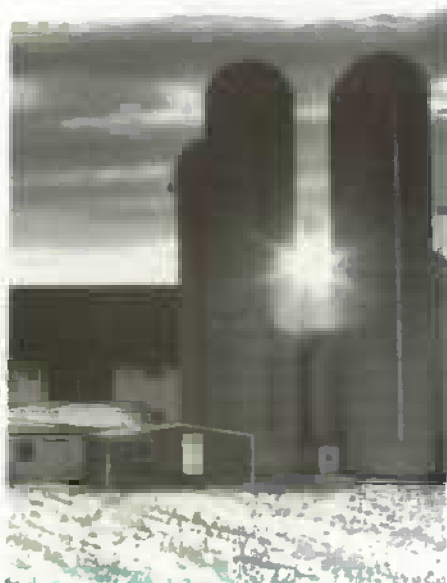
U.S. beef production is expected to increase about 1 percent in 1990, but still remain below the 1983-88 average. Per capita beef consumption is likely to decline slightly, following a 3-pound drop in 1989. Fed cattle prices may rise 1-3 percent.

U.S. broiler output is forecast to jump 7 percent in 1990, buttressed by several years of positive net returns. Turkey production also should keep expanding, but more slowly than in 1989. Egg production will turn around, growing by about 2 percent. Prices of broilers, turkeys, and eggs are all anticipated to drop in 1990.

The global wheat stocks-to-use ratio is expected to fall to 21 percent at the end of the 1989/90 marketing year, the lowest in more than 30 years. Reacting to market signals, world wheat production in 1990/91 may be headed for a second consecutive record high. World ending stocks in 1991 are likely to increase.

In the U.S., 1989/90 wheat supplies are down 11 percent from a year earlier. Production increases covered only about half of the drop in beginning stocks. With 2 years of rising prices and lower acreage reduction requirements, planted area for the 1990/91 crop could go up 5 percent.





## Agricultural Economy

### Global Output and Farmers' Cash Incomes To Rise

The world agricultural outlook is characterized by rebounding commodity output, rising consumption, and falling crop stocks in 1989/90. World crop production is recovering from 1988/89's reduced level. But for most crops, production will not match continued high use.

In 1990, world animal product output will expand slightly, led by much larger U.S. poultry production. World commodity consumption will reach a record in response to continued economic and population growth. Commodity prices will be supported by strong demand and declining stocks of most crops, although feed grain and oilseed prices will continue easing from 1988/89's drought-driven levels.

In 1990/91, assuming trend yields, U.S. and foreign production of many crops could rise again, and some stock rebuilding may take place. Farmers will be responding to prices that are likely still to be above predrought levels and to loosened acreage reduction requirements for wheat and cotton in the U.S.

#### Marketing Receipts To Go Up

This outlook suggests that U.S. farmers can look forward to another year of favor-

able income. Marketing receipts should climb, reflecting larger commodity output and higher prices for some commodities. At the same time, lower feed costs will help stabilize livestock production expenses.

Even with smaller direct government payments, farmers' net cash income will range between \$52 and \$57 billion in 1990. This would be 2 to 4 percent higher than USDA's latest estimate for 1989. Net farm income, however, is expected to be \$44-\$49 billion, 2 to 5 percent below 1989's record.

Most prices likely will be easing by the time the 1990 crop is harvested in the fall, accounting for the slight estimated drop in net farm income.

Net farm income is an estimate of the value of production plus direct government payments less all costs in a calendar year, while net cash income reflects estimates of cash receipts plus government payments less out-of-pocket expenses.

For U.S. consumers, record meat production, bigger crops, and slowing inflation will hold retail food price increases to 3 to 5 percent in 1990. In 1989, food prices probably rose nearly 6 percent, because of lingering effects of the 1988 drought in the first half.

U.S. crop output is likely to increase in 1990 as acreage expands and yields trend higher. In the 1990's, export demand for U.S. agricultural products should expand as economic growth and GATT trade reform widen international markets.

#### *Despite Higher Global Consumption, Export Competition Is Strong*

World commodity consumption is moving to record levels and will exceed production for most crops. Use is responding to three factors:

- real economic growth of 3 to 3-1/2 percent,
- meat output 1 percent larger, spurring demand for feed grains, and
- population growth of about 1.7 percent.

Despite the tightening in some international markets, U.S. grain and oilseed exports will face increased competition from expanded production in other countries. U.S. grain exports will be down slightly because of rebounding crops and exports in Canada and Argentina, near-record exports by the EC, and tighter U.S. food grain supplies.

U.S. soybean exports will face record South American production. A smaller crop is likely in Brazil, but the Argentine crop will be up sharply with expanded acreage and higher yields. Early indications point to a record low for the U.S. share of the world market. In contrast to grains and soybeans, the U.S. share of the world cotton market is expected to recover from a year earlier.

The global wheat outlook for 1989/90 is highlighted by record production, a slight drop in world trade, and a further decline in stocks. Much of the gain in world production is being offset by lower beginning stocks, leaving supplies up only marginally. With 1989/90 use advancing to a record, ending stocks will drop again.

The outlook for U.S. wheat in 1989/90 is for higher output, lower beginning stocks, smaller exports, and possibly the smallest ending stocks since 1974/75.

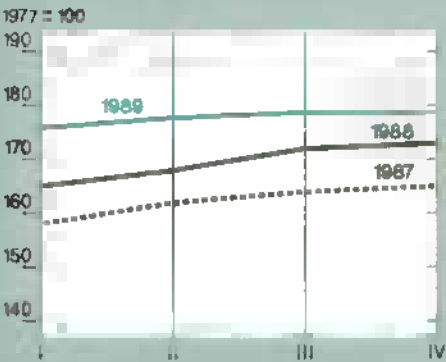
Global rice production in 1989/90 is forecast at a record, up 2 percent from last season's bumper crop. Large harvests are expected in China, Bangladesh, Indonesia, Vietnam, and Thailand. Given normal weather, global rice production should expand in 1990/91 and prices decline further.

U.S. rice production and stocks are down from a year earlier, especially for long grain. U.S. exports rose 19 percent in 1988/89 from a year earlier. Exports are forecast to fall to 79 million cwt in 1989/90 because of an expected decline in world imports.

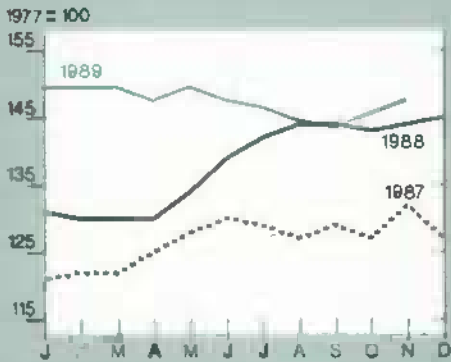
The global coarse grain outlook for 1989/90 is for larger supplies but a further decline in ending stocks. World coarse grain trade will continue to rise, following last year's 13-percent increase. Bigger imports by the USSR, South Korea, China, and several lesser importers are forecast to result in the largest world coarse grain trade since 1984/85. U.S. exports are forecast up around 4 percent.

# Prime Indicators of the U.S. Agricultural Economy

Index of prices paid by farmers



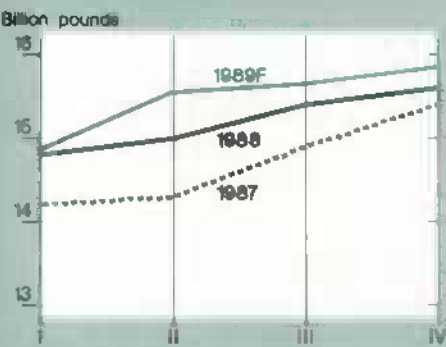
Index of prices received by farmers<sup>1</sup>



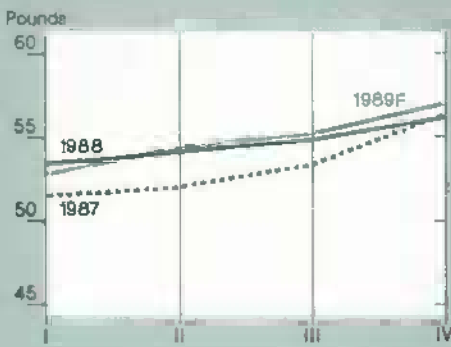
Ratio of prices received to prices paid



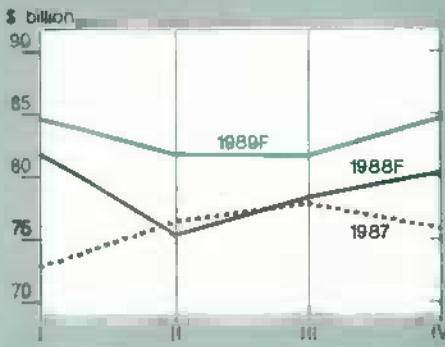
Red meat & poultry<sup>2</sup> production



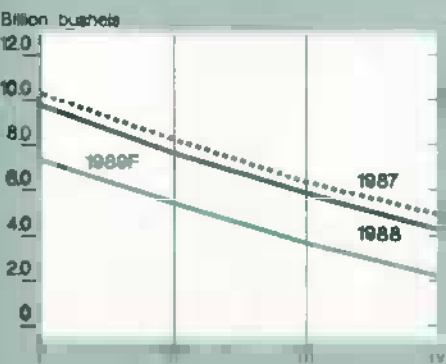
Red meat & poultry consumption, per capita<sup>2,3</sup>



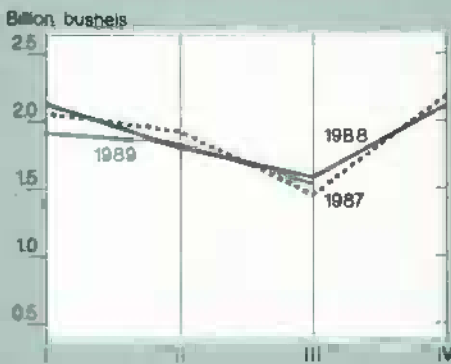
Cash receipts from livestock & products<sup>4</sup>



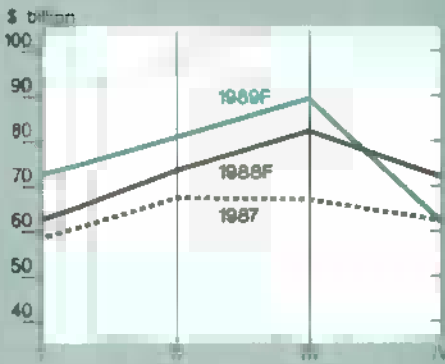
Corn beginning stocks<sup>5</sup>



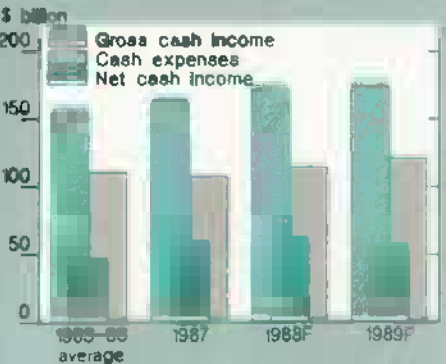
Corn disappearance<sup>5</sup>



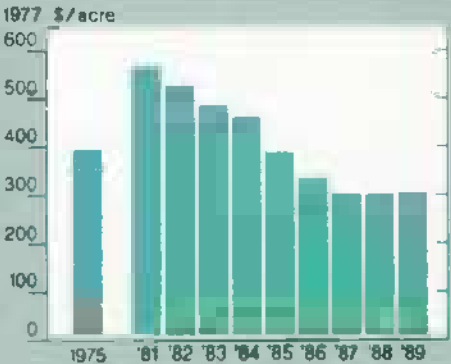
Cash receipts from crops<sup>4</sup>



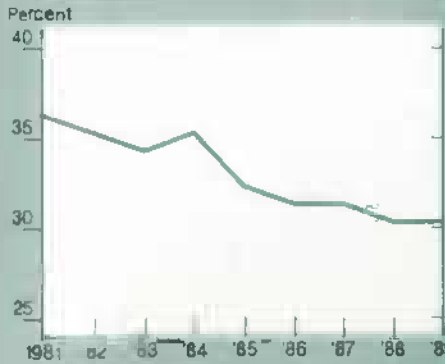
Farm net cash income



Average real value of farm real estate



Farm value/retail food costs



For all farm products. <sup>2</sup>Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts.  
<sup>3</sup>Retail weight. <sup>4</sup>Seasonally adjusted annual rate. I=Dec.-Feb., II=Mar.-May, III=June-Aug., IV=Sept.-Nov. F=forecast.

This year's U.S. corn crop is up almost 2.7 billion bushels from 1988/89's drought-reduced levels, to the largest since 1986/87. Most of the increase is due to a steep rebound in yields from 1988.

Weather permitting, U.S. corn production should show additional gains in 1990. While 1989 yields were up sharply from 1988, they remained below trend. Relatively strong world prices might also result in some increase in foreign coarse grain production.

Global oilseed supplies and stocks are rebounding in 1989/90, because of a soybean production recovery from drought in the U.S. and Argentina. U.S. soybean production is gaining 25 percent, and Argentina's crop this spring could be up nearly 60 percent if yields are near normal. The large gains are only partially offset by reductions in China's and Brazil's soybean crops.

Looking to 1990/91, lower prices for soybeans are likely to keep area expansion in check in the major producing countries. Area planted in the U.S. may decline, mainly because of lower producer returns and a more flexible wheat program.

#### **Global Animal Output Up Slightly**

Following a 5-percent gain in 1988, world pork production is expected to show little change in 1989 and 1990. World beef and veal production likely declined slightly in 1989 and will hold at about the same level in 1990.

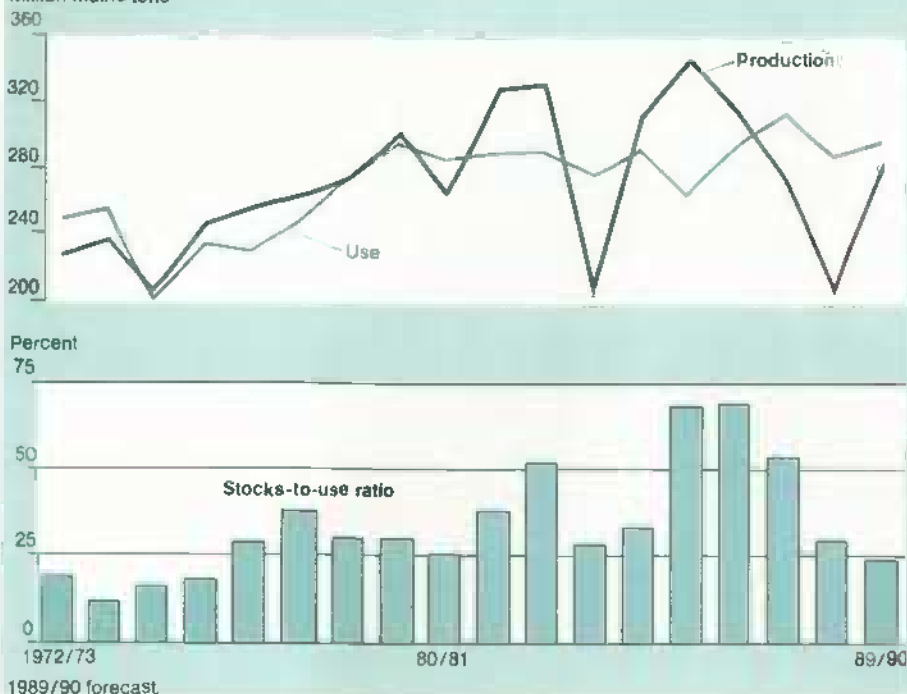
In the U.S., total meat production in 1990 is expected to advance about 3 percent from last year's record. The increase will come largely from the poultry sector. Both beef and pork output probably will expand about 1 percent this year.

U.S. egg production likely declined about 3 percent in 1989. With the drop in production, prices were substantially above a year earlier and producers' net returns rose. The higher returns are expected to boost output and lower prices in 1990.

Poor forage conditions and high feed concentrate costs tightened milk supplies in

#### **U.S. Grain Use Exceeds Output for Third Year in Row**

Million metric tons



1988/89. And with a strong demand for cheese and large commercial exports of nonfat dry milk, prices rose sharply. Producers are expected to respond to the higher prices, so milk production likely will go up later in 1989/90. For the year, production may rise about 1 percent.

#### **U.S. Crop Production To Expand in 1990/91**

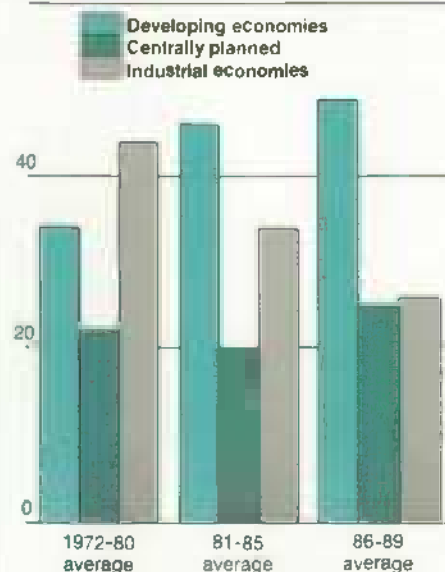
Strong prices for many crops, loosened acreage reduction program requirements, and higher yields portend more U.S. crop output in 1990/91.

In 1989, U.S. producers set aside 59 million acres. Some 29 million, nearly half the total, were under annual government programs. The lowering of acreage reduction requirements for participation in the annual wheat and cotton programs will bring some of this land back into production.

Crop yields remained slightly below trend in 1989/90, reflecting drought damage to the winter wheat crop and subnormal conditions for several other crops. Now, subsoil moisture in the Corn Belt is much improved over a year ago. Also, new technology and better production practices should continue to add to productivity.

#### **Developing Countries' Share Growing for U.S. Wheat & Coarse Grain Exports**

Percent



For the combined crops of wheat, feed grains, and soybeans, the projected trend yield for 1990 is nearly 2-1/2 percent above the yield realized in 1989. Even with reduced soybean production likely, combined grain and soybean production could be up 5 to 7 percent in 1990/91 if yields are on trend and harvested acreage is up 3 to 4 percent.



## **More U.S. Exports To Developing Countries**

Economic growth and falling trade barriers in the 1990's would stimulate world consumption and agricultural trade, particularly for developing countries. U.S. agricultural exports would stand to gain from these developments, in view of ample crop production capacity to meet market needs at home and abroad.

Developing countries take 50 percent of combined global wheat and coarse grain imports; their share has been widening in spite of their debt and other financial problems. And they have taken an increasing share of U.S. exports—49 percent of the total in the second half of the 1980's, up from 46 in the first half and 34 in the 1970's.

Developing countries' imports should pick up as economic recovery continues and their financial constraints are eased by increased exports, aided by market access gained under GATT trade reform.

Countries with centrally planned economies now account for 25 percent of U.S. exports, above the 20 percent in the first half of the 1980's and slightly above the 22 percent in the 1970's.

In the years ahead, these countries may undertake major economic reforms to become less dependent on imports to meet rising demand. Still, continued large imports are likely over the next several years, particularly coarse grains for the Soviet Union and wheat for China.

In the industrialized market, the U.S. share of 26 percent is well below 34 percent for the first half of the 1980's and 44 percent in the 1970's. GATT trade reform could well result in a reduction in global agricultural support and protection and permit an expansion in trade for industrialized countries. For example, lower grain prices in some countries would stimulate use and dampen production, resulting in larger imports. [James R. Donald (202) 447-6030]

## **Beef Output, Prices To Rise Slightly**

Beef production is expected to increase about 1 percent in 1990, but still remain below the 1983-88 average. Larger fed steer and heifer slaughter, along with higher weights, will offset expected declines in cow slaughter.

Per capita beef consumption is likely to slip slightly in 1990, following a decline of more than 3 pounds in 1989. All of the reduction will be in nonfed processing beef.

Rising consumer incomes should provide continued support for beef prices. But larger poultry supplies plus a small increase in pork output will dampen price increases. Consequently, fed cattle prices may rise only 1 to 3 percent in 1990.

## **Net Returns To Move Up**

Net returns to cow/calf producers averaged near \$40 per head in 1989 and could reach \$45-\$50 in 1990. This would be the fifth straight year of positive returns, and should strengthen incentives to rebuild herds.

Forage supplies in most areas have remained adequate in spite of regional droughts that have kept cattle numbers from expanding. These factors eventually should lead to larger cattle inventories and higher beef production. However, it could be 1991 before larger calf crops translate into increased slaughter.

Feed grain prices remain historically high but are averaging well below a year earlier; they should maintain the year-over-year decline well into 1990. Near-normal feed grain production in 1990/91 would replenish inventories and pressure prices lower over the longer term.

Hay production likely rose 19 percent in 1989. The area harvested declined 2.8 million acres from a year earlier, but average yields rose 24 percent. As in 1988, long-term Conservation Reserve acreage was made available for haying in drought areas last summer. The additional acreage helped offset regional shortages and pushed production of grass hay to a record.

In spite of the higher production, low beginning hay stocks kept supplies relatively tight and prices near a year earlier. The average price received by farmers for all hay in late 1989 was \$85.70 per ton, compared with \$86.80 a year earlier.

Continued poor pasture conditions in several of the Plains and Western states still could force additional culling from cow herds if winter weather is drier and colder than normal. Pasture and range feed conditions deteriorated somewhat in late 1989, as parts of the Southern Plains and Southwest received little moisture in the early fall.

## **Cattle Cycle To Turn Up**

Further drops in beef cow slaughter are expected in 1990. Dairy cow culling rates will moderate because of milk-price gains in 1989. Total commercial cow slaughter could drop to around 6 million head in 1990, the lowest since 1979.

The impact of 1988's drought and 1989's poor hay quality appears to have been the greatest on the dairy sector, where culling rates were high. Cumulative dairy cow slaughter through late 1989 was running nearly 50,000 head above a year earlier; most of the increase occurred during the first half.

Beef cow culling in 1989 also ran slightly above earlier expectations because of spring drought in the Central Plains. Total beef and dairy cow slaughter probably declined to about 6.3 million head for the year, down about 2 percent from 1988.

## **Feeder Cattle Supplies Increased**

Yearling stocker cattle prices continued trading in the low to middle \$80's per cwt in late 1989, despite weak to negative feeder returns. Strong demand for stocker cattle to go back to grass likely supported prices, since feedlot losses averaged near \$20 per head.

Yearling feeder cattle supplies outside feedlots in early October were nearly 17 percent above a year earlier, while the inventory of lighter calves was about unchanged. The 1989 calf crop probably declined slightly from a year earlier and could result in lower yearling supplies in 1990.

Increased heifer retention also may restrict feeder cattle supplies. Recent retention rates, however, have been modest compared with previous expansion years. This reflects lower returns per cow than the \$60-\$120 returns above cash costs during 1978-80.

#### ***Larger Fed Cattle Marketings To Come***

Additional declines in cow and bull slaughter are forecast for 1990, but will be offset by higher fed steer and heifer slaughter. U.S. feedlot marketings are expected to rise 1 to 2 percent in 1990, with the magnitude of the increase dependent on future prices and profit prospects.

Dressed slaughter weights will remain record large in 1990 as cattle continue to be placed on feed at heavier weights.

Lower feedlot placements in the spring and summer of 1989 should ensure a seasonal price rise into the early spring this year. Beyond the early spring, seasonally higher marketing rates likely will keep beef supplies above a year earlier, pressuring prices into the lower \$70's per cwt, particularly during the second half of the year.

Fed cattle marketings in 1989 were 3 percent below 1988. Higher feeder cattle prices and dismal profit prospects led to lower feedlot placements during the second and third quarters, and in turn reduced fed cattle marketings. Cattle feeders have suffered through an extended string of losses, and prospects do not look much better into the spring of 1990.

Lower processing beef supplies during the second half of 1989 generally supported cattle prices. But the lower supplies were partially offset by record-heavy fed cattle weights. Dressed slaughter weights probably averaged 677 pounds in 1989, up nearly 10 pounds from the year before.

For 1990, fed steer prices at Omaha are expected to average \$71 to \$77, up from \$72.50 in 1989 and \$69.50 in 1988. Continued year-to-year drops in grain prices, assuming normal weather during the 1990 growing season, generally will support yearling stocker-feeder cattle prices about \$1 above 1989's \$86.

Prices for lighter grass-type cattle are expected to range near 1989's average in the mid-\$80's per cwt, and weaned calves could again bring prices near \$100 per cwt.

#### ***U.S. Cattle Imports To Drop***

U.S. cattle imports are forecast to decline in 1990, mainly because of declines from Canada. The new slaughter facility in Alberta should draw fed cattle that might otherwise have been exported to U.S. plants, and dairy herd liquidation also should slow.

U.S. imports of live cattle probably slipped 2 percent in 1989 from a year before. Live cattle imports from Mexico through September were down 30 percent to 512,580 head, while imports from Canada over the period rose 21 percent to 421,489 head.

The Mexican government in 1989 reduced the live cattle export tax from 20 to 10 percent, or \$30 per animal. The export quota also has been increased to about 700,000 head. So, the flow of cattle from Mexico is likely to be quite heavy in early 1990.

The tax is scheduled to be reduced in September 1990 to 5 percent and again in September 1991 to 1.67 percent. In September 1992, it is scheduled to be eliminated.

#### ***U.S. Beef and Veal Exports To Jump Again***

U.S. beef and veal exports likely jumped 46 percent and reached about 1 billion pounds carcass weight in 1989. Another 12-15 percent increase is likely in 1990.

The Japanese have agreed to raise the beef quota in 1990 by another 60,000 metric tons. The U.S. will have to share this market with the Australians, who are expected to price their beef very competitively. Even with domestic output in Australia down because of herd rebuilding, their exports to Japan increased in 1989. Australian beef production is forecast to rise in 1990 and a large share likely is destined for Japanese markets.

Storage facilities in Japan, mainly for frozen beef, are strained. Typically, a substantial amount of the meat sent from the U.S. is frozen. This contrasts with Aus-

tralian beef, a larger share of which is fresh chilled.

Some beef stockpiling in Japan likely occurred at the beginning of 1989 under the expectation of strong consumer demand. Retail beef prices do not yet reflect the lower prices for imported beef under the new system. Also, the infrastructure to handle the additional beef from both the U.S. and Australia must be developed, and there apparently are some problems in developing outlets for frozen U.S. beef.

U.S. exports to Korea increased to 38 million pounds during the first 9 months of 1989, up from 6 million during the same period a year earlier. On November 9, the South Koreans agreed to accept a GATT ruling against beef import restrictions.

Total beef imports into the U.S. for 1989 probably dropped 11 percent to 2,125 million pounds (carcass weight). In 1990, imports are forecast to increase from Australia, but decline from New Zealand. As a result, total imports are likely to be about 2,080 million pounds, down slightly from 1989. (Steve Reed (202) 786-1710)

#### ***Hog Prices To Rise***

Pork supplies in the U.S. may be slightly larger in 1990. Commercial pork production could be below a year earlier this spring and summer, but a substantial year-over-year increase is possible in the fall. Rising net returns likely will prompt producers to expand breeding inventories.

The U.S. may import more pork in 1990, but fewer live hogs. U.S. pork exports may decline slightly.

Barrow and gilt prices at the seven major U.S. markets may average near \$45 per cwt for all of 1990, up from \$44 in 1989. Prices could be above a year earlier in the first half, but lower prices are likely in the fall. Retail pork prices may rise 3-5 cents per pound, averaging near \$1.86.

#### ***Pork To Become More Pricey Than Other Meats***

Retail pork prices could increase considerably relative to poultry, and climb



slightly relative to beef. This would reverse 1989's price trends, when pork prices fell while prices of other meats rose 3 to 8 percent.

As pork becomes more expensive in relation to competing meats in 1990, retail demand for pork likely will weaken. But, consumer perceptions usually change rather slowly, so any decline in demand may be gradual. Both wholesale and retail demand was strong in the second half of 1989, and may continue to be vigorous in the first part of 1990.

#### ***Breeding Inventories To Move Up***

The U.S. breeding herd increased from mid-1986 until mid-1988, but declined modestly during the 1988/89 market year. The 1988 drought reduced feed grain supplies and drove feed costs higher.

Consequently, net returns to hog producers declined sharply, averaging below breakeven from fourth-quarter 1988 through second-quarter 1989. In early September, the U.S. breeding herd was 3 percent smaller than a year earlier.

Net returns after cash expenses rose above breakeven in second-half 1989, and may remain positive throughout 1990. With larger feed grain crops, production costs are declining.

Higher hog prices also have contributed to the improvement in net returns; fourth-quarter 1989 prices likely averaged \$8 per cwt above a year earlier. Returns projected for 1990 are well below those of 1986 and 1987, but sharply higher than in the 1988/89 market year.

The modest inventory reduction during 1988 and 1989 suggests that the industry is reasonably strong financially and is poised to resume the expansion that was underway prior to the 1988 drought.

Improving net returns may encourage hog producers to retain gilts for breeding. In fact, breedings may have begun to increase in late 1989. Some expansion is likely in the heart of the Corn Belt, where last year's inventory cutback left excess capacity, and where feed grain supplies have been replenished.

New hog confinement facilities also will be coming on line. Corporate investment

in hog production has grown over the last few years, increasing the number of large farrow-to-finish operations. This segment of the industry may continue to expand.

Consequently, breeding inventories likely will trend higher over the year, creating potential for larger pork production in fourth-quarter 1990 and beyond.

#### ***Fall Pork Production Will Be Greater***

Farrowing intentions point to small changes in pork production during the first three quarters of 1990. A modest increase is possible in the first quarter, and small declines may occur in the spring and summer.

Hog slaughter in the fall of 1990 will be determined largely by the number of sows and gilts bred from November 1989 through February 1990. With producers' net returns tending higher, breedings during this period likely will be up from a year earlier. Accordingly, hog slaughter is expected to climb in the fall.

The extent of the increase will depend on how aggressively producers expand breeding herds. A 2-percent gain in the March-May 1990 pig crop could raise fourth-quarter pork production as much as 5 percent, since production last fall was light in relation to last spring's pig crop. Thus, potential exists for a substantial increase in pork production by the end of 1990.

Annual production could be up about 1 percent from 1989, reaching 16 billion pounds for the first time since 1980.

#### ***Pork Imports From Eastern Europe To Drop***

U.S. pork imports have declined in each of the past 2 years, but an increase is possible in 1990. Larger imports are expected from the European Community, where greater supplies and lower prices are probable. EC pork production is likely to increase in response to high 1989 prices.

U.S. imports from Eastern Europe may decrease, though, as those countries adjust to economic and political reform, and focus on maintaining domestic meat supplies.

Hogs and pork product imports from Canada will be affected by countervailing duties imposed by the U.S. International Trade Commission. The duty on live hog imports likely will be raised in 1990. But pork imports from Canada may be slightly larger than in 1989. Imports in 1989 were depressed by strikes at Canadian packing plants that now have been resolved.

U.S. pork exports rose about 28 percent in 1989, as shipments to both Japan and Mexico increased. In 1990, U.S. exports may decline slightly. Sales to Japan may be about the same as in 1989. Japanese pork imports from all sources could increase, but Denmark and Taiwan likely will meet the additional demand. In both Denmark and Taiwan, pork production is expected to rise in 1990.

U.S. sales to Mexico could decrease this year, partly because of a 20-percent tariff on U.S. hogs and pork products imposed last July. Also, Mexico's foreign exchange reserves may be insufficient to maintain pork imports at their 1989 pace.

#### ***Hog and Pork Prices To Dip Below 1989***

Barrow and gilt prices may average above a year earlier in the first half of 1990, but likely will face increasing pressure from expanding hog supplies and competition from other meats as the year progresses. By midfall, prices are expected to drop below 1989.

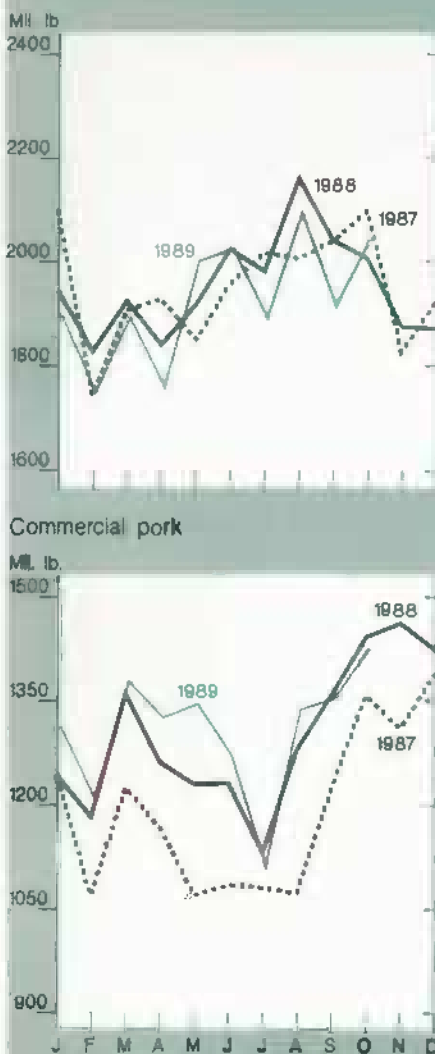
Demand for wholesale pork strengthened considerably in the second half of 1989. Some of the strength stemmed from an increase in shipments to Japan, and some from anticipation of U.S. government purchases of pork bellies for Poland.

Retail pork prices could average near \$1.85 per pound in the first half of 1990, steady with second-half 1989 but about 5 cents higher than a year earlier. Retail prices may remain above a year earlier, supported by higher wholesale prices, until the fourth quarter. For all of 1990, prices may average \$1.85-\$1.87 per pound, 3-5 cents higher than in 1989.

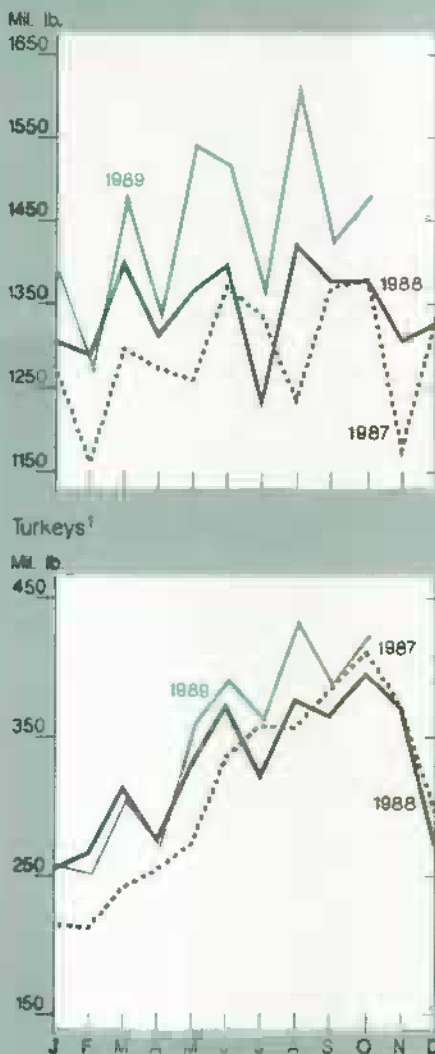
Wholesale-to-retail price spreads declined substantially in second-half 1989, and may remain below a year earlier in the first half of 1990. However, spreads likely will trend higher as the year progresses. [Kevin Bost (202) 786-1768]

# Production of Livestock and Products

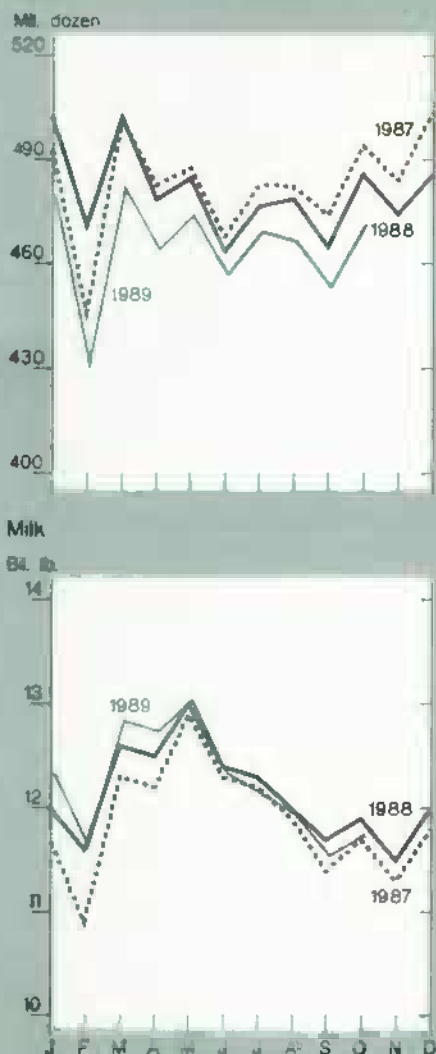
Commercial beef



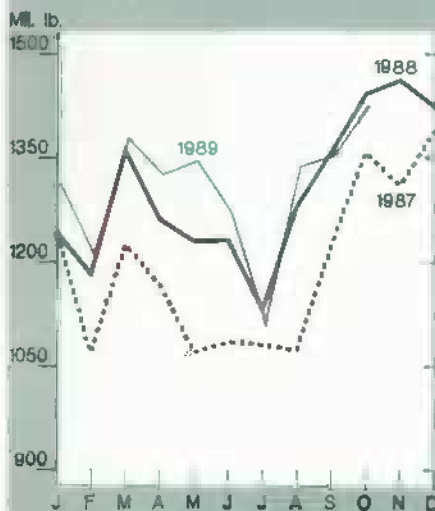
Broilers<sup>1</sup>



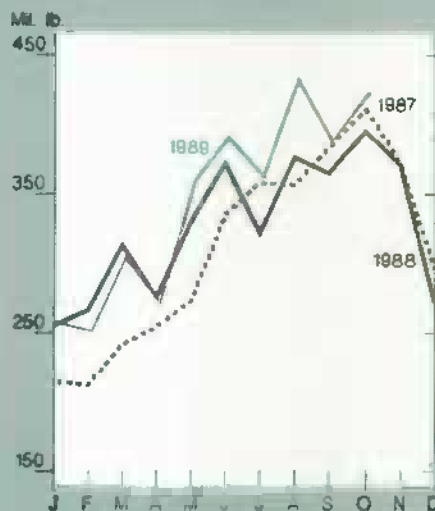
Eggs



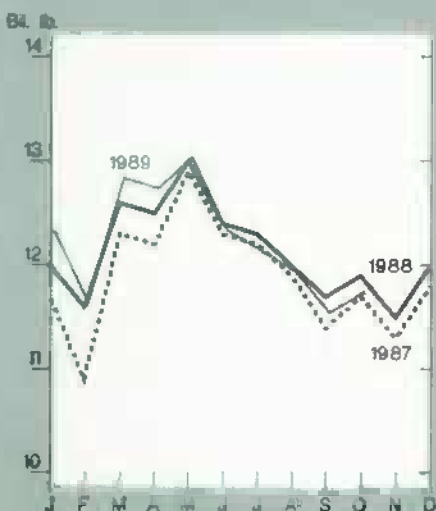
Commercial pork



Turkeys<sup>1</sup>



Milk



<sup>1</sup>Federally inspected production, ready-to-cook

## Poultry & Egg Output To Grow, Prices To Fall

Broiler production is forecast to continue growing in 1990, buttressed by several years of positive net returns. Turkey production also should keep expanding, but more slowly than in 1989.

Egg production is expected to turn around and increase, as producers respond to the strong net returns associated with reduced output in 1989. Prices of broilers, turkeys, and eggs are all likely to be lower in 1990 because of larger supplies.

## Broiler Output May Expand 7 Percent

Broiler production is likely to jump about 7 percent in 1990, based on expectations of continued positive returns. This growth follows an estimated 7-percent increase in 1989 and will extend the long-run expansion of the 1980's. The average American in 1990 probably will eat about 70 pounds of chicken, up more than 4 pounds from a year earlier.

The hatching egg laying flock was up 6 percent in early November over a year earlier, suggesting that growers intend to expand broiler production in early 1990. Output increases are expected to be great-

est in the first half, with gains slowing to slightly under 7 percent in the second half. Prices probably will weaken seasonally in the fall, following summer highs.

The increase in production likely will push prices lower, but continuing strong demand may partially offset the rising supply.

The average 12-city wholesale egg price for 1990 is expected to be 49-55 cents per pound, down from 59-60 in 1989. First-quarter prices may average 48-54 cents. Prices could strengthen seasonally in the second and third quarters before dropping in the fourth.

Net returns to broiler producers are expected to be positive through 1990, but below 1989 because of lower prices. Nevertheless, anticipated lower corn and soybean meal prices will partially offset the expected broiler price slide. The cost of production probably averaged 50 cents per pound in 1989, and may drop to the mid-40's in 1990.

#### **World Production To Jump 5 Percent**

Global broiler production may climb 5 percent in 1990, following a nearly 3-percent rise in 1989. The largest producers, which generate about 75 percent of world output, are the U.S., the EC, Brazil, the Soviet Union, and Japan.

U.S. broiler exports are forecast to increase slightly in 1990 to about 960 million pounds, up from 935 million in 1989. This would follow record exports in 1989, which probably were 22 percent over 1988. The increases are reflecting additional sales to the USSR for the most part.

Expected lower domestic broiler prices will help the U.S. position in world trade. Access to Japan, Mexico, Canada, and the USSR probably will continue to improve.

Export expansion in 1989 was spurred by relatively low prices for dark meat parts. Most 1990 exports are expected to be commercial sales and not made through government programs such as the Export Enhancement Program (EEP). Six major buyers (Japan, Hong Kong, Mexico, Canada, Singapore, and Jamaica) accounted for 86 percent of the broiler exports in 1989.

#### **Turkey Output Growth To Slow**

Turkey production for all of 1990 is expected to increase about 5 percent, following an estimated 6-percent expansion in 1989. Per capita consumption may rise to over 17 pounds in 1990, up from 16.7 in 1989.

Turkey production for first-quarter 1990 is forecast to exceed a year earlier by about 16 percent, topping the estimated 12-percent increase in fourth-quarter 1989. Turkey poult placements in October were up 20 percent from a year earlier.

However, with low or negative net returns in late 1989, increases in placements likely will slow. Second-quarter 1990 production may grow about 8 percent. Output in the second half is expected to be about the same as in 1989.

Prices should weaken in 1990 because of greater supplies of both turkey and competing meats. Wholesale hen turkeys in the Eastern region are expected to average 52-58 cents a pound during the first quarter, down from 62 cents a year earlier.

Prices will continue to be low through the second quarter, but increase to 1989 levels in the second half as production growth slows. Prices for the year likely will average 57-63 cents per pound, compared with 66-67 cents in 1989.

Average net returns for turkey producers probably were near breakeven in the fourth quarter of 1989 and slightly negative for all of 1989, making it the third consecutive year of negative returns.

Returns are expected to be negative in the first half of 1990, but turn positive in the second half as wholesale prices increase. Production costs likely will average about 5 cents per pound less because of expected lower feed costs.

#### **World Turkey Production, Trade Moving Up at a Strong Clip**

World turkey production is expected to rise about 4 percent in 1990, nearly the same as in 1989. The U.S. will remain the leading producer, accounting for over 55 percent of world output. Other leading producers include the EC, the USSR, and Canada.

Turkey exports from the U.S. in 1990 are forecast to increase about 10 percent, to approximately 48 million pounds. A turkey meat classification issue with West Germany is being resolved, enabling U.S. exporters to meet a stricter definition of seasoned turkey, and thus resume exports to this major market. Lower U.S. turkey prices also will enhance competitiveness.

Turkey exports in 1989 probably dropped about 15 percent from 1988. Higher U.S. prices, combined with trade restraints in major markets such as West Germany and Egypt, held down sales.

#### **Egg Production Turns Around**

U.S. egg production is expected to rise about 2 percent this year, to 5.7 billion dozen, in contrast to a 3-percent decline in 1989. The egg industry approaches the 1990's after many years of flat to declining production. Output in 1990 will be nearly 2 percent lower than a decade earlier.

Per capita consumption was an estimated 235 eggs in 1989 and should be about the same in 1990.

Table egg production is likely to increase nearly 2 percent to about 5 billion dozen in 1990. Gains reflect flock expansion encouraged by strong net returns in 1989. Production in the first half is expected to be about 1 percent larger than a year earlier. Hatching egg production is anticipated to increase 3-4 percent.

Table egg production declined 4 percent in 1989, reflecting producer adjustments to heavy losses through most of 1987 and 1988. Output during fourth-quarter 1989 was about 3 percent below a year earlier. The table-egg-type laying flock in early November was down about 3 percent.

While net returns in 1989 were the best in years, producers appear to be remembering the heavy losses in 1987 and 1988, so flock expansion is not occurring as rapidly as might otherwise be expected.

As supplies increase in 1990, lower wholesale egg prices are anticipated, averaging 67-73 cents per dozen, compared with an estimated 81-82 cents in 1989. First-quarter 1990 prices will average 77-83 cents per dozen, but prices could decline to the middle to low 60's in the second half as additional eggs come to market.

Producers can expect positive net returns through at least the first half of 1990, although at lower levels than in 1989. Returns in 1990 are expected to be strongest during the first quarter, and then decline through the rest of the year as supplies rise.

The level of returns, particularly in the second half, will depend greatly upon how much production increases. Average net returns for 1989 are estimated to



have been 24-28 cents per dozen during the fourth quarter and about 15 cents for the year.

### **Egg Trade Balance Will Improve**

Global egg production may increase slightly over 2 percent in 1990, about the same rate as in the U.S. China likely will raise output 4 percent and the Soviet Union 2 percent.

With lower prices, U.S. egg exports in 1990 are expected to be up 4-5 percent, reaching slightly over 100 million dozen. This recovery would follow a decline in 1989, when exports may have fallen as much as 30 percent.

The U.S. will be better able to compete with the EC this year. Sales to Mexico and exports under EEP also will influence 1990 shipments. Exports under EEP and export credit guarantee programs were down in 1989. Japan is expected to continue as the largest U.S. customer.

Egg imports are likely to decline in 1990 as lower prices of U.S. eggs make them more attractive to U.S. processing companies. Imports in 1989 may have reached 28 million dozen, the highest since 1984. [Lee A. Christensen (202) 786-1714]

### **Dairy Markets To Be More Orderly**

The biggest change expected in 1990 in dairy markets is simply a return to more normal conditions. Although the price declines from late 1989 will be dramatic, 1990 prices still will be higher than projections made a year or two ago.

Dairy market fundamentals in 1989 were not much different than in 1988. But, the particular sequence of industry decisions and events in 1989 turned what might have been only a moderately tight market into a chaotic one with record prices.

Prices would have been lower if:

- cheese makers had been more aggressive about rebuilding stocks in early 1989,
- nonfat dry milk producers had been less aggressive about export commitments,

- users had been more concerned about supplies, or
- milk production had weakened earlier.

### **Commercial Use Will Be Strong**

The late-1989 price jumps may slow growth in fluid and cheese sales in 1990, partially offsetting the effects of a still-strong economy on demand. However, prospects for some recovery in sales of cream-based products are reasonably good. The support price for butter is now sharply lower following the January 1 support realignments. Total commercial use in 1990 may rise 1-3 percent from a year earlier.

Commercial use of nonfat dry milk was very strong in 1989, mostly because of the estimated 350-400 million pounds exported. After prices declined during the first quarter, exporters obtained extremely large commitments through the end of 1989.

These export commitments, along with low commercial stocks of American cheese, made the dairy industry unusually vulnerable to any slowing in milk production. Commercial use of nonfat dry milk in 1990 will be smaller because of declining exports.

Although prices in international markets are expected to continue relatively high, U.S. exports of nonfat dry milk will fall in 1990. Commercial use of cheese and fluid milk will keep skim solids fairly tight domestically.

Also, nonfat dry milk makers are not likely to overcommit to the export market for a second year. Even so, export demand is expected to continue as an important price factor, unless international prices run below the U.S. support purchase price.

During January-September 1989, commercial use of cheese rose 5 percent from a year earlier. Although retail cheese prices were not as high as in recent years, continued economic growth and an end to direct cheese donations boosted commercial use. Late-1989 use probably did not increase much. Sharply rising prices rationed available supplies.

Fluid milk sales in 1989 ran 1-2 percent above a year earlier, after the small 1988 rise. However, sales of frozen products and cottage cheese fell.

Commercial use of butter dropped sharply during the first half of 1989, almost the sole cause of declines in the milk-equivalent (milkfat basis) total of all dairy products. Even though butter sales may have recovered during the last half, earlier declines and the lack of cheese supplies may have held the 1989 milk equivalent total slightly below 1988, the first dip since 1980.

### **After Sagging, Milk Output To Rise**

Milk production rose 2 percent in early 1989 from a year earlier, in spite of continued feed cost pressures from the 1988 drought. However, milk per cow collapsed during the spring, as supplies of dairy-quality forage were exhausted and hay crops were delayed by cool weather. Output per cow has been below a year earlier since July, evidence of substantial damage from feed problems.

Dips in milk per cow and continued high culling rates kept July-October 1989 milk output 1 or 2 percent below a year earlier. Very high milk prices and slipping feed prices created ample incentive to expand output last autumn. If production responded, the 1989 total may have been just slightly under 1988's 145.5 billion pounds.

Forage quality and the extent of the mid-1989 damage to cow productivity remain key uncertainties for early 1990 production. If current incentives can generate upward momentum, milk production probably will expand during most of 1990. For the year, milk production likely will grow 1-3 percent.

Feed grain and protein meal prices in 1990 will be lower. During the first half of 1990, however, milk prices will fall faster than feed prices. The now-favorable milk-feed price ratio and returns over concentrate costs will be substantially eroded by spring.

### **Stocks Skimpy**

Commercial stocks followed the same general pattern throughout 1989. While butter holdings were ample, commercial stocks of American cheese stayed low,

and manufacturers' stocks of nonfat dry milk were small relative to commercial use.

The only significant government stocks have been of butter. Early last November, government holdings were up by half from a year earlier.

Government purchases for all of 1989 probably totaled close to 1988's 8.9 billion pounds (milk equivalent, milkfat basis), even though second-half removals were modest by the decade's standards. Removals in 1990 are expected to decline slightly. However, butter purchases are likely to remain large.

### *Prices Rose Sharply, But Will Drop in Early '90*

Sharp decreases in wholesale prices of nonfat dry milk and cheese have started. Milk prices must fall drastically in early 1990 to reach levels supported by expected output, commercial use, and international demand. By late spring, farm milk prices may be below a year earlier.

Markets are likely to be tight enough to trigger a significant seasonal rise during the second half of 1990—but nothing like the situation in 1989. Indeed, merchandisers may overcompensate and be too cautious about stocks and export sales, limiting late-1990 price increases. For the year, 1990 milk prices may not be much above 1988.

By mid-1989, the pattern of prices during the second half of the year had already been set. Export commitments and stocking decisions made it impossible to absorb easily any slowing in output, causing a scramble for supplies and soaring prices when milk production dropped. Prices had to rise enough to ration shortened domestic supplies. Even then, supplies were not adequate to maintain normal product flow.

Record cheese and nonfat dry milk prices in late 1989 also pulled farm milk prices up to new records. The Minnesota-Wisconsin price of manufacturing grade milk hit a peak of well over \$14 per cwt, up \$2 from a year earlier and \$3 above the March low. The 1989 average price of all milk was more than \$1 per cwt higher than 1988's \$12.22. [James J. Miller (202) 786-1770]

## **Wheat Stocks Lowest in Decades**

U.S. and world wheat stocks are the lowest in years—the large cushion of only 2 to 3 years ago has been cut dramatically. Reacting to market signals, world wheat production in 1990 may be headed for a second consecutive record.

World import demand is expected to continue to expand, if only modestly. Global wheat stocks are likely to increase. But, any unexpected drop in production or a shift in import policy, particularly for the USSR, could cause total world wheat trade to jump sharply, shrinking stocks again. With very low global stocks, any significant upturn in import demand could push wheat prices sharply above current expectations.

### *Supplies for 1990/91 Could Climb*

The global wheat stocks-to-use ratio is expected to fall to around 21 percent at the end of the 1989/90 marketing year, the lowest in more than 30 years.

After 4 consecutive years of decline, global planted area turned up in 1989. Most of the increase took place in the major exporters, as their producers reacted to strong prices. U.S. producers also were responding to less restrictive acreage reduction programs. Area very likely will increase again for the 1990 crop in both exporting and importing countries, as producers respond to a 2-year stretch of high prices.

The current marketing year promises good returns to wheat producers. The U.S. has announced program provisions requiring that very little wheat area be held out of production for 1990. These factors almost guarantee a larger U.S. wheat area.

If global wheat area does expand, and yields stay on trend, the world's farmers could easily harvest a 1990 crop of 545 million tons. This would be a second consecutive record. Back-to-back records have happened only twice before in the last 30 years.

If food use of wheat in 1990/91 continues its expansion, global utilization could total around 540 million tons. For the first time in 4 years, world wheat produc-

tion is likely to exceed consumption, resulting in some stock rebuilding.

World wheat trade for 1990/91 is expected to grow modestly from this year. Competition to capture this increase in demand will be more intense than in recent years. Wheat supplies in virtually all of the major exporters could be larger.

### *Domestic Wheat Supplies Drawn Down Again*

U.S. wheat supplies in 1989/90, at 2.76 billion bushels, are down 11 percent from a year earlier, and 31 percent below the 1986/87 record. Production is up over 230 million bushels from 1988/89, but the drop in beginning stocks was more than twice as large as the production gain. Supply can cover forecast demand, but only if stocks are drawn down again.

U.S. wheat production is estimated at 2,042 million bushels, up 13 percent from 1988/89, but lower than every other year this decade. Area planted increased 17 percent, but adverse weather in the winter wheat regions raised abandonment and lowered yields. Planted area increased because of fewer acres idled under the annual program, lower program participation, and higher prices.

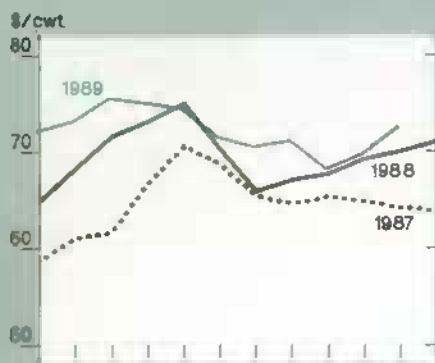
U.S. wheat exports in 1989/90 are projected to be nearly 1.3 billion bushels, 10 percent below 1988/89. The U.S. share of the global market is expected to fall 3 points to 36 percent. A significant decline in Soviet imports, higher exportable supplies in Canada and Argentina, and tight U.S. supplies are limiting exports.

Total use of U.S. wheat in 1989/90 is projected to slip for the second year in a row, dropping 14 percent from the 1987/88 record. At about 2.3 billion bushels, use would be the third lowest during the 1980's, but still larger than any year before 1980/81. Wheat ending stocks are forecast to be only 443 million bushels, down 37 percent from 1988/89 and less than one-fourth the 1985/86 record.

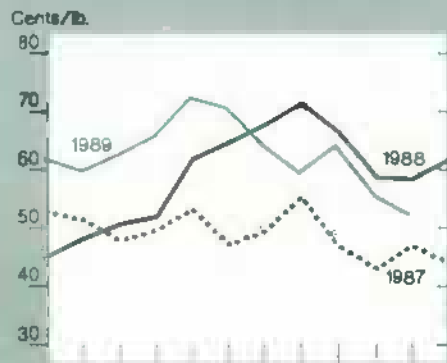
Prices received by farmers are forecast to be \$3.80-\$3.95 per bushel, the highest in nominal terms since the record \$4.09 in 1974/75. The forecast U.S. ending stocks-to-use ratio, 19 percent, would be the lowest since 1973/74.

# Commodity Market Prices

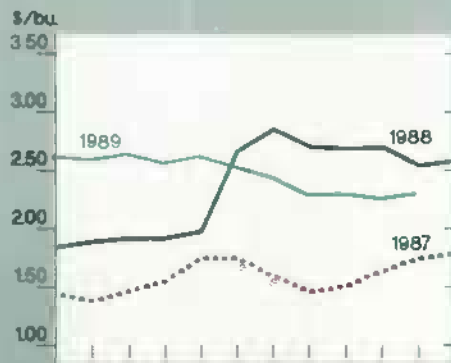
Choice steers, Omaha



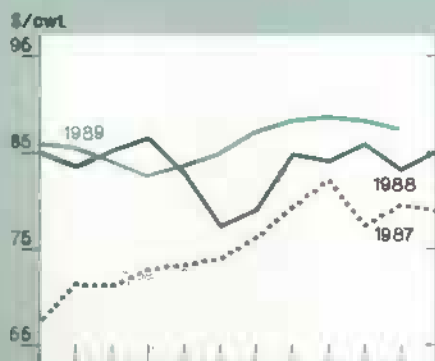
Broilers, 12-city average



Corn, Chicago<sup>3</sup>



Feeder cattle, Kansas City<sup>1</sup>



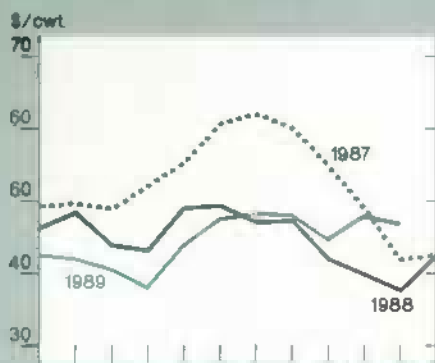
Eggs, New York<sup>2</sup>



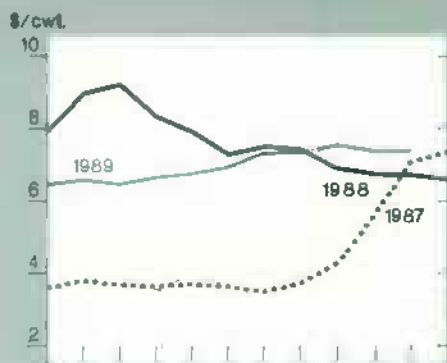
Soybeans, Chicago<sup>4</sup>



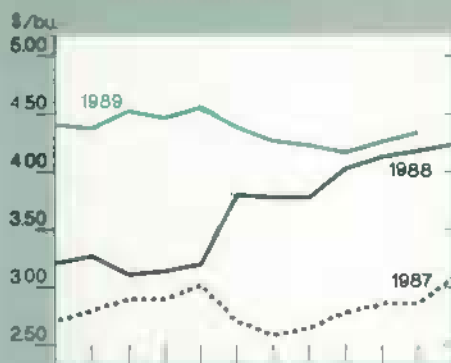
Barrows and gilts, 7 markets



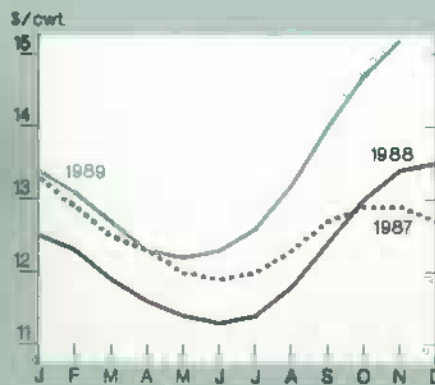
Rice (rough), SW Louisiana



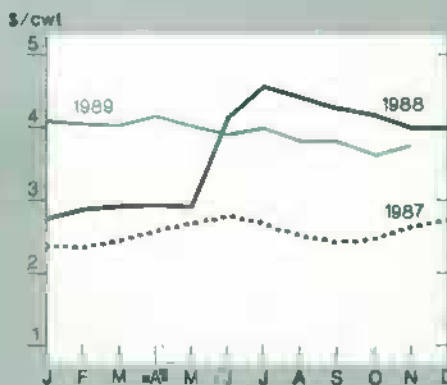
Wheat, Kansas City<sup>5</sup>



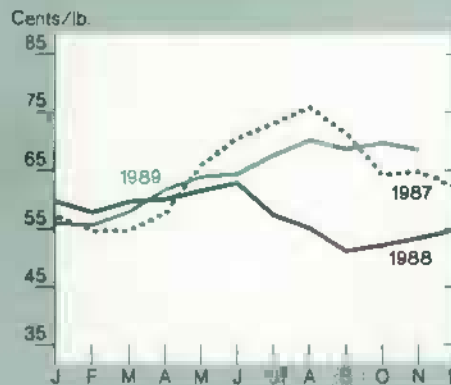
All milk



Sorghum, Kansas City



Cotton, average spot market



<sup>1</sup>500-700 lbs., medium no. 2    <sup>2</sup>Grade A large

<sup>3</sup>No. 2 yellow.    <sup>4</sup>No. 1 yellow.    <sup>5</sup>No. 1 HRW.



Such a ratio might be expected to generate even higher prices. However, uncertainty about import demand, particularly from the USSR, some slackening in foreign wheat purchases after an early-season surge, and structural changes in wheat markets have dampened price increases.

#### **1990/91 U.S. Planted Area Could Grow 5 Percent**

Reflecting a relaxed acreage reduction program requirement and strong prices, planted area for the 1990/91 wheat crop may increase about 5 percent, to around 80 million acres. If yields rebound to near the 1983-87 average, the 1990 harvest could total close to 2.6 billion bushels, the largest since 1984.

However, wheat supplies will be only about 10 percent above 1989/90, because stocks have been dramatically reduced. Given some gain in supplies and likely softening prices, domestic use of wheat should increase. Food use should continue the recent upward trend.

The U.S. could well face stiffer competition in the export market if competitors expand wheat area as expected. Nonetheless, the U.S. likely will capture at least some of the projected expansion in world trade.

Greater domestic use and higher exports will not be sufficient to absorb the 1990 crop, so 1990/91 will be a year of stock building. Wheat prices received by farmers likely will average below the preceding 2 years.

#### **Competitors: EC May Have Bumper Crop in 1990**

Reacting to sharply higher wheat prices, Argentina's producers planted more area for the 1989 crop. Area in 1990 should be about the same. Argentina's exportable supplies are not expected to rise significantly in the years ahead, and its annual share of the world wheat market could slip.

As long as the outlook is good for beef and wool prices in Australia, wheat area there is not expected to change appreciably. Total wheat area likely will continue at 9-10 million hectares. The choice between wheat and barley may depend more on the weather at planting.

Attractive returns from wheat relative to other grains prompted an expansion in Canadian area in 1989, following 2 years of decline. Weather permitting, wheat area in 1990 could approach the 1986 record of slightly more than 14 million hectares. Canada could increase wheat production and exports in 1990/91 if yields improve from the weather-impacted levels of the past 2 years.

Despite the introduction of a multiyear land set-aside program, wheat area in the EC is expected to show only a small drop over the next several years. And recent EC program decisions are expected to encourage the production of high-yielding winter wheats.

The yield effect alone could result in a significant increase in EC wheat output over the next 5 to 6 years. There will be intense pressure within the Community to move the bulk of this wheat onto the export market.

The EC has been cutting support prices in recent years, but instead of reducing production, the lower prices may have prompted farmers to increase production to maintain total revenues. Additionally, the EC has shifted its primary market support mechanism from stock accumulation to subsidized exports.

In 1989, the EC had its second largest wheat harvest ever—over 79 million metric tons, 4.5 million bigger than the 1988 crop—even though yields actually averaged below trend. With the large crop, stagnating domestic use, and a policy to draw down stocks, exports in 1989/90 likely matched the 1988/89 record of 21 million tons.

Because EC growers expanded winter wheat seedings of high-yielding varieties last fall, with normal weather another bumper harvest can be expected in 1990. If that happens, another record EC wheat export program is in the offing for 1990/91. [Frank Gomme (202) 447-7700]

#### **Global Rice Trade Sets Record**

World rice production in 1989/90 is forecast to reach a record 334 million metric tons (milled basis), up about 2 percent from a year earlier. However, despite

the larger crop, consumption is still expected to exceed output marginally.

Strong import demand boosted calendar 1989 trade to an estimated record 14.5 million tons, 1.4 million more than the previous high in 1981. Purchases by China, India, and Indonesia fueled imports in the first half of 1989/90, but the general pace is slowing in the second half.

Given normal weather, global rice production should expand in 1990/91, and prices probably will continue drifting down.

#### **Vietnam's Large Exports Were a Surprise**

The biggest surprise of 1989 was the record export volume from both Thailand and Vietnam. In 1989, expanding Vietnamese rice production boosted exports to about 1.4 million tons. This volume far surpasses the 5-year average and is nearly four times more than the record set in the early 1960's.

New Vietnamese policies apparently have been a major impetus to production and export growth. For example, the government now allows individuals and their families to lease land for 10 to 20 years.

Thailand likely exported a record 5.9 million metric tons in calendar 1989. Strong demand and government reforms fueled production and bolstered exports. Thailand stopped taxing rice exports in 1986.

In 1990, world rice trade may equal 13.4 million tons, down significantly from last year's record but still the second highest ever. Greater demand in South America and West Africa likely will be more than offset by a substantial decline in China's record imports and lower imports also by Mexico, India, and Indonesia.

#### **U.S. Production Dropped**

U.S. rice production in 1989/90 was about 156 million cwt, down 2 percent from the previous year. All of the decrease came from an estimated 6-percent drop in long grain production. Combined medium and short grain production likely rose 10 percent.

Lower overall output reflected a 5-percent drop in harvested area from

1988/89, to 2.75 million acres. Long grain acreage probably was down 7 percent, while combined medium and short grain acreage went up about 3 percent.

The decrease in long grain acreage can be traced to several factors: slightly reduced prices before planting compared with a year earlier, a 3-percent lower target price and a 2-percent lower loan rate, increased participation in the 50/92 program, reduced nonprogram acreage, and substitution of soybeans for rice on rice base, which was allowed for the first time.

Overall yields are estimated to have reached a record 5,697 pounds per acre in 1989/90, up 186 pounds from a year earlier and an increase of 46 pounds from the previous record 1986/87 crop. Favorable weather helped yields in Arkansas, Mississippi, and California.

U.S. rice exports are likely to be down 8 percent to 79 million cwt, because of a forecast reduction in world imports. U.S. farm prices may rise, reflecting tighter supplies than in 1988/89. However, U.S. export prices are expected to remain competitive in the world market, in part because of the marketing loan program.

For the fourth consecutive year, U.S. production probably will fall short of use. As a result, stocks may slip to 24 million cwt by the end of the 1989/90 marketing year, down 11 percent from a year earlier and the lowest since 1980/81.

U.S. prices weakened in late 1989 in response to greater domestic availability, larger foreign supplies, and a decline in world import demand. U.S. farm prices are forecast to range from \$6.00 to \$8.00 per cwt in 1989/90, compared with \$6.83 in 1988/89 and \$7.27 in 1987/88.

[Frank Gomme (202) 447-7700]

### **Feed Grain Supplies Bounce Back**

The U.S. feed grain supply for 1989/90 is about 290 million metric tons, 2 percent above 1988/89. In 1988/89, beginning stocks were large but severe drought over the Corn Belt, Northern Plains and Lake states reduced production sharply; stocks fell by more than 50 percent.

However, a rebound in yields and a nearly 13-percent increase in acres har-

vested more than offset the drop in 1989/90 beginning stocks. The corn supply is rising 4 percent and the oat supply 31 percent from last season.

However, increases in barley and sorghum output this year fell short of covering the drawdown in stocks during 1988/89; supply is down 2 percent for barley and 14 percent for sorghum.

USDA expects the total supply of feed concentrates to rise about 4 percent during 1989/90. Other energy concentrate feeds should be down slightly, but protein feeds, largely soybean meal, are forecast to rise nearly 4 percent.

### **1990/91 Crop May Be Larger**

A couple of factors point to an increase in the 1990 corn harvest. Enrollment in the feed grain program this spring is expected to be down slightly. Also, fewer farmers are likely to sign up for the 0-92 provision, some are expected to switch soybean acres planted under the 10-25 option back to corn, and some are expected to plant more permitted acres.

These moves would boost plantings to around 75 million acres, up from 72.3 million in 1989.

Yields also may improve in 1990. For the four droughts preceding 1988—those in 1970, 1974, 1980, and 1983—yield was higher the second year following the drought than the first year following it. After the drought of 1983, the 1985 yield exceeded the 1984 yield by 10.6 percent. For the four droughts, the average increase from the first to the second postdrought year was 6.7 percent.

Subsoil moisture in the Corn Belt last fall was better than a year earlier. But, 1989 showed that normal or better temperature and rainfall in June and July can offset a lack of subsoil moisture.

### **Domestic Use, Exports Rising**

Domestic food, seed, and industrial use of feed grains is forecast up 2 percent to 38.3 million metric tons. The wet milling industry may use nearly 4 percent more corn to make sweeteners and ethanol in 1989/90 than in the previous year. Some ethanol plants may reopen, so the

dry milling industry will use about 2 percent more corn.

Oats use by the processing industry is expected to rise about 10 percent in 1989/90, as the market for oat bran products continues to expand.

Exports of feed grains are forecast at 62.8 million metric tons in 1989/90, 1 percent more than in 1988/89. Corn likely is accounting for all of the increase. While barley exports are nearly flat, sorghum exports likely are dropping 1.5 million metric tons.

Corn exports are forecast at 2,150 million bushels for 1989/90, 4 percent over 1988/89. The Soviet Union, South Korea, and several other countries are expected to make big purchases. The Soviets bought about 320 million bushels during October.

Domestic feed and residual use of feed grains in 1989/90 probably will total 128 million metric tons, up almost 8 percent from disappearance a year earlier. Corn is expected to comprise over 70 percent of the increase and oats over 16 percent. Barley and sorghum combined will account for the rest.

Total concentrates used in 1989/90 are forecast to increase 6.5 percent to 180.7 million tons. High-protein feeds likely will account for 36.3 million tons, up 5 percent from last year.

Feed and residual use of corn is forecast at 4.2 billion bushels for 1989/90, an increase of 250 million bushels from 1988/89. Feed and residual disappearance of oats is forecast at 300 million bushels, 100 million more than last year. Most of this oats increase will be fed to dairy cows, red meat animals, and poultry, whereas most of the feed disappearance in 1988/89 went to pleasure horses and thoroughbreds.

### **Ending Stocks To Fall Slightly, Prices To Remain Strong**

Total forecast use of 229 million metric tons of feed grains in 1989/90 exceeds production, and ending stocks are likely to be down almost 5 million tons. This would be the third consecutive year of decline in stocks, leaving the lowest carryout since 1984/85.



Carryout stocks of corn for 1989/90 are forecast at nearly 1.9 billion bushels, slightly less than the 1988/89 carryout. Ending stocks would be 24.9 percent of use, down slightly from 1988/89.

Based on historical relationships, a stocks-to-use ratio of this size would suggest an average farm price for 1989/90 of about 16 cents above loan rate, or about \$1.81. However, farmers' bullish price view in 1988/89 appears to be carrying into the current marketing year.

Farm sales of corn were light last fall, and virtually no postharvest price weakness occurred. In mid-November, the price of corn at Central Illinois elevators was \$2.32 a bushel, 2 cents a bushel higher than the average price in August.

Several factors may account for the slow movement of corn last fall:

- farmers had ample on-farm storage;
- they may expect prices to go higher because they anticipate large additional purchases by the USSR;
- with farm income relatively high in 1989, producers may have been delaying sales until 1990 to lower their income taxes; and
- farmers may be holding corn as a hedge against a possible drought in 1990.

The season-average farm price will depend on the relative strength and mix of these factors, as well as on weather this spring and early summer. If taxes are a major factor, sales should pick up after January 1 and prices likely will be under pressure.

Sales probably also will pick up in late winter, when farmers need more cash to cover expenses for seedbed preparation, planting, and cultivation.

The season-average farm price for corn is forecast to range between \$2.10 and \$2.40 a bushel, compared with last year's \$2.54. The upper end of the range represents unfavorable weather in the spring and summer or greater disappearance and lower stocks than now forecast.

The lower end would result from favorable spring and summer growing conditions or a change in supply and use expectations that would leave larger ending stocks than the current forecast.

The season average price of sorghum is forecast to be \$1.95-\$2.25 a bushel. Barley prices are forecast to be \$2.35-\$2.55. Barley farm prices averaged \$2.47 for June-October, the first 5 months of the 1989/90 crop year. With ending stocks expected to be tight, adverse growing conditions in the major states producing malting barley likely would cause prices to rise sharply this spring.

Oat prices are forecast at \$1.40-\$1.60 a bushel for 1989/90, down sharply from last year's average \$2.61. For June-October, the average price received by farmers was \$1.51 a bushel. [Lawrence Van Meir (202) 786-1840]

#### Oilseeds: A Return to Normalcy

Soybean production, supply, and domestic use are returning to normal in 1989/90 after the disruption of the 1988 drought. Exports, though, are not resuming predrought levels, largely because of the size and timing of South American shipments. Foreign oilseed production will continue to expand in the 1990's.

Weaker prices and fewer U.S. soybean acres are likely in 1990. USDA's 10-25 program to promote planting flexibility probably did not increase soybean plantings much in 1989. If it is offered again in 1990, farmers are still unlikely to expand, given the prospect of weaker soybean prices.

Soybean oil will continue to be the dominant U.S. domestic oil, but canola and corn oil could capture a larger market share.

Increased cottonseed production is expected in 1990. Weaker soybean prices and more cottonseed output in 1990 will result in less overall strength in the oilseed market. So, sunflower production could fall.

Domestic and export demand for peanuts is expected to increase in 1989/90; growth probably will continue in the 1990's.

#### 1989/90 Soybean Crop Rebounds

Although more soybean acres were harvested in 1989 than in 1988, yields were about a bushel lower than the 1985-87 average. Production is estimated at 1.937 billion bushels, up 25 percent from the drought-reduced 1988/89 crop. When U.S. growers expanded plantings by 2.7 percent in the spring of 1989, they were reacting to a number of signals. First, the South American outlook was mixed; most analysts expected a large Brazilian crop, but a smaller Argentine crop.

Second, the November 1989 soybean futures contract traded above \$7.00 from January through April. This was up from a year earlier.

Third, sign-up for the 10-25 program was underway, offering farmers the chance to plant 10 to 25 percent of their permitted acres of program crops to soybeans or sunflowers without loss of program base.

Fourth, a lower acreage reduction program requirement for wheat increased the potential for double-cropping with soybeans.

Fifth, USDA and others were forecasting the lowest ending stocks in over a decade.

Farmers will be reacting to the 1990 version of these signals when making their upcoming planting decisions.

#### Small Response to USDA Program

The Secretary of Agriculture was required to offer the 10-25 program in 1989, but also was directed to scale back the allowed acreage under certain conditions—if a full sign-up for the option was anticipated to result in a 1989/90 season average soybean price below \$5.49 per bushel.

Growers signed up 3.5 million acres under 10-25 for soybeans. Then, USDA announced that only 80 percent of the sign-up would be permitted, reducing the potential soybean acres under 10-25 to 2.8 million.

The flexibility provided by the 10-25 program probably had only a small effect on soybean acreage. The expected returns to soybeans likely were not high enough or certain enough to displace much corn,



even with the base protection afforded by the program.

### ***U.S. Export Demand Lagging in 1989/90***

U.S. soybean exports will increase to 15.79 million metric tons in 1989/90, still only about 70 percent of predrought totals. Foreign exports also will increase compared with a year earlier, but world trade in soybeans again will be below 1985-87.

U.S. crushing will rise over 1988/89 because of improved domestic meal demand and strengthening oil markets. In addition, foreign crush is expected to show a larger percentage increase than U.S. In Brazil and Argentina, record ending stocks will support a larger crush. In the EC, smaller rapeseed and sunflowerseed supplies and improved margins will boost the crush.

Domestic soybean meal demand will be strong in 1989/90—perhaps 21.35 million short tons. Expanding poultry production and reduced availability of alternative proteins, mostly cottonseed, underlie the expected 7.8-percent growth in meal use.

Soybean meal exports will be little changed from last year, perhaps 4.45 million metric tons. Strong competition from South American producers, both in the fourth quarter of 1989 and probably again in the summer of 1990, will limit U.S. opportunities.

The average soybean price received by farmers for 1989/90 is expected to be between \$5.25 and \$5.75 per bushel, down from \$7.35 in 1988/89. Prices have fallen significantly in years following drought-affected marketing years, that is, after 1980, 1983, and 1988.

At least in recent history, prices have fallen again 2 years out from a drought year. A forecast 84-percent increase in ending stocks, to 335 million bushels, also points to weaker prices in 1990/91.

The higher crush expected in 1989/90 will increase soybean oil production 4 percent, and supply will approach 14 billion pounds. Domestic demand is turning around. Domestic disappearance of soybean oil slipped 3 percent in 1988/89. At the time, soybean oil lost domestic markets to cottonseed, corn, sunflowerseed, and rapeseed oil.

Soybean oil will recapture market share in 1989/90, with domestic use forecast to reach a record 11 billion pounds.

On the trade side, U.S. soybean oil will be up against larger foreign soybean oil and record palm oil production. The U.S. is expected to export 1.4 to 1.5 billion pounds of soybean oil, down about 12 percent.

But exports could rise in 1990/91 because vegetable oil consumption likely will outpace production, drawing down stocks.

### ***Canola Oil Use Increasing***

Although soybean oil continues to dominate the domestic fats and oils sector, other oils have shown significant growth. The more critical changes include the growth in rapeseed oil (especially the edible type, canola oil) and corn oil, while use of animal fats has declined.

Canola oil use increased more than 400 million pounds in the last 5 years. FDA granted canola "generally recognized as safe" status, opening the door for its use in food products. And its low saturated fat content has attracted consumer interest. Virtually all canola oil used in the U.S. is imported from Canada.

While USDA does not report data on U.S. rapeseed production, industry estimates range from 65,000 to 150,000 acres. Even though the U.S. could become a significant canola producer in the 1990's, canola is not likely to replace soybeans as the primary U.S. oilseed.

Corn is the second largest oil used in the U.S., with domestic disappearance exceeding 1 billion pounds a year. The oil is a byproduct of corn milling for products such as high-fructose corn syrup, ethanol, corn snacks, and cereals. So, the forces driving the production of other products will determine corn oil's supply and competitiveness in the 1990's.

### ***Factors To Watch in 1990***

The combined soybean production in Argentina and Brazil for 1989/90 could be a record 31 million metric tons. This portends downward pressure on soybean and product prices once the South American crop enters world markets. Rebound-ing stocks also point to lower prices.

A lower acreage reduction program (ARP) requirement for wheat in 1990 is expected to affect soybean acres. But predicting the net effect is complicated. Lower wheat ARP's increase the potential for double-cropping soybeans.

However, some winter wheat growers might expand wheat plantings onto some normally single-cropped soybean acres. This could reduce next year's soybean planting.

Cutting to the bottom line, it seems likely that growers will be facing lower planting-time soybean prices than in 1989. This could be the more important factor and lead to fewer acres in 1990. Acreage likely will return to the 1987-88 average. [James D. Schaub (202) 786-1840]

### ***Extremely Low Cotton Stocks Could Rise in 1990/91***

World cotton consumption has exceeded production each year since 1985; ending stocks have been cut from 45.5 million bales to 31 million last August.

A further reduction in stocks is expected by the end of this season, resulting in the lowest stocks-to-use ratio since World War II.

In contrast to the past several years, global cotton production is expected to increase in 1990/91 while consumption growth will slow. So stocks could rise from their recent lows.

Global consumption has increased from almost 83 million bales in 1986/87 to a record estimated 86 million bales this season. Greater consumption has also set records for world trade in raw cotton. Nearly 26 million bales were shipped internationally in 2 of the past 3 years. Now, the U.S. has reclaimed a more normal share of world exports.

With stocks down and uncertainties surrounding production, consumption, and trade, the potential for extreme price fluctuations will continue. Cotton prices have been highly volatile during the 1980's.

### ***U.S. Output Down in 1989/90***

In 1989, a reduction in planted area and larger abandonment lowered crop pros-

pects to about 12.1 million bales. Competitive U.S. prices, strong foreign and domestic mill use, and low foreign stocks are expected to boost domestic consumption and U.S. exports.

Upland production in 1989/90 is probably falling to 11.4 million bales, but extra-long staple (ELS) is likely to reach a record 654,000 bales.

Domestic mill use probably rose for the fifth consecutive year, despite rising imports of foreign textiles. Increased mill consumption during the last half of the 1988/89 marketing year was related to stronger apparel and accessory sales, especially denim and active sportswear items, and lower textile inventories.

Apparel sales continued strong, and consumers' preference for natural fibers is expected to increase use in 1989/90.

Textile imports in 1989 likely reached nearly 2.3 billion pounds, almost matching the record set in 1987. Although textile exports probably gained also, the textile trade deficit may have approached 4 million bale-equivalents, representing nearly 40 percent of U.S. cotton mill consumption in 1989.

### Foreign Production Climbing

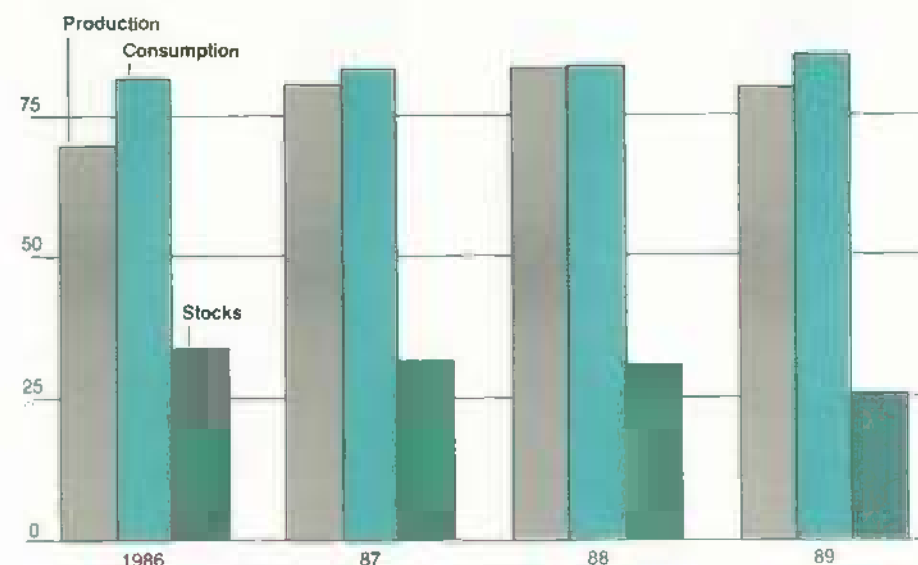
Following weather-reduced crops in many of the major foreign producing countries in 1986/87, output rebounded. Since 1986/87, foreign output has ranged between 66 and 69 million bales. But, China's production in 1989/90 is projected at 19 million bales, 100,000 below the previous season's crop and well below expected consumption. The Soviet crop is estimated to be 700,000 bales less than a year earlier.

On the other hand, Pakistan and India's prospects have improved. The Pakistani crop is expected to reach a record 7.1 million bales, nearly 500,000 more than in 1988/89. Indian production is projected up more than 700,000 bales to 9 million, the second highest on record.

Even though foreign production has increased, demand has remained high. Projected at 77.7 million bales, foreign consumption in 1989/90 is expected to set a sixth consecutive record. While consumption by importing countries is projected to remain stable, consumption

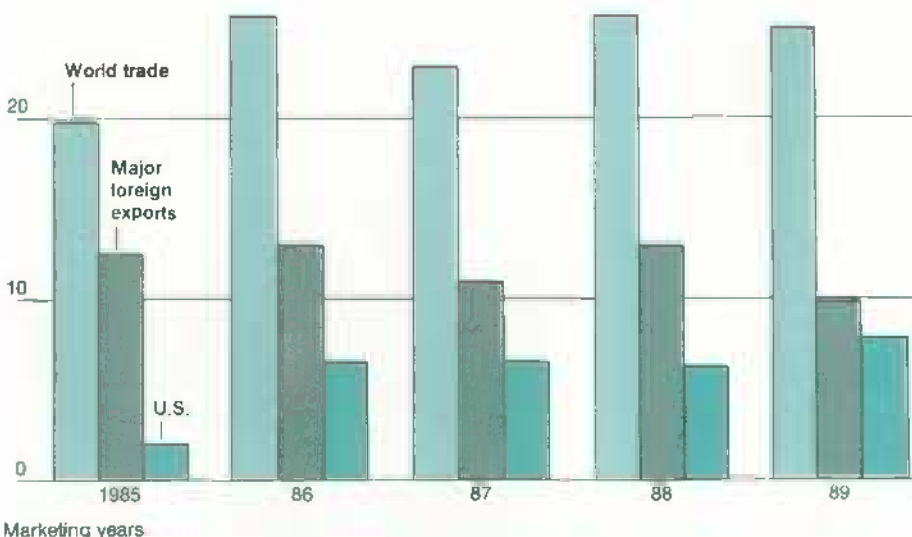
### For World Cotton, Consumption Has Outpaced Production 4 Years in Row

Million bales  
100



### World Cotton Trade: U.S. Has Reclaimed Share Since 1985

Million bales  
30



by exporting countries probably will rise by more than 2 percent.

With consumption still substantially above production, ending stocks are expected to tighten further in 1989/90, falling from 23.7 million bales to 21.5 million. The foreign stocks-to-use ratio is expected to drop to only 28 percent.

### After Big Increases, Cotton Trade Stabilizes

From 1986 to 1988, record world trade resulted from increased demand for cotton. World trade rose above 25 million bales for the first time in 1986/87 and likely is remaining high in 1989/90. However, major foreign exporters' ship-

ments may decline by 3 million bales this season because of higher domestic consumption and lower exportable supplies.

U.S. cotton exports are forecast to reach 7.5 million bales in 1989/90, the largest since 1979/80. Higher U.S. market shares are likely in the Pacific Rim textile-producing countries and in Western Europe. In addition, China is expected to be a net importer of cotton this season.

As a result, the U.S. share of global trade is projected at 30 percent, well up from the previous year's 24 percent.

#### **Global Output Could Rise in 1990/91**

Although many uncertainties surround the global outlook for 1990/91, current economic conditions and policies suggest an expansion of world cotton area and production. World production could range from 85 to 90 million bales, up 5-12 percent from 1989/90.

In the U.S., the early season outlook is for significantly larger upland cotton acreage and production. This increase is based on 1990 upland cotton program provisions; for 1990/91, program participants are required to reduce acreage by only 12.5 percent of base, compared with 1989/90's 25 percent.

Program enrollment in 1990/91 likely will approach 1989/90's 89 percent, despite an improved market situation. If the lower acreage reduction program (ARP) requirement encourages nearly 90-percent participation, upland planted acreage could increase to 12-13 million acres, with as much as 2 million planted outside the program.

The 1990 crop could range from 13.5 to 16.5 million bales. If trend yields are realized, the upland crop could exceed 15 million bales, almost 4 million above the estimated 1989 crop.

#### **Lower Prices May Shrink Pima Area**

The outlook for American pima production is significantly different from the U.S. upland outlook. In 1990/91, ELS planted area could shrink by as much as 50,000-150,000 acres from its current-season record, to around 250,000 acres. Many producers may elect to plant

upland cotton in lieu of ELS because of higher upland prices and lower ELS prices.

Assuming trend yields and normal abandonment, 1990/91 ELS production could range from 450,000 to 500,000 bales. With 1989/90 ending stocks estimated at about 200,000 bales, total ELS supplies in 1990/91 could range from 650,000 to 700,000 bales—below the current season, but still at historically high levels.

For all types of cotton, tight world supplies and continued high prices likely will result in increased foreign production in 1990/91. Major producing countries—such as China, Pakistan, India, and Australia—are likely to increase production through expanded acreage. In addition, the Soviet Union may boost output.

If prices remain near current expectations, Southern Hemisphere producing countries also are likely to expand production further. Assuming normal yields, foreign production could be 70-75 million bales.

#### **Consumption Growth To Slow**

U.S. cotton consumption should remain strong again next season. Although domestic mill use may not match this season's expected 8.2 million bales, consumption still should top 7.5 million.

If growth in global population and income follow recent trends and cotton prices remain in line with manmade fibers, foreign cotton consumption could exceed 75 million bales for the fifth consecutive year. However, higher cotton prices this season are likely to limit the growth in foreign consumption rates in 1990/91.

With production prospects larger both in the U.S. and abroad, and overall consumption slightly lower, stocks likely will rise at the end of the 1990/91 marketing year. In the U.S., ending stocks may total 4 to 5.5 million bales, marginally above the target level set by the 1985 Food Security Act. Nonetheless, world supplies are expected to remain fairly tight.

Assuming no major slowdown in foreign economic activity, import demand for cotton may drop only slightly next sea-

son. U.S. exports could be 6-7 million bales during the 1990/91 marketing year, dropping back to a more normal share of world trade, while foreign exports are likely to expand. [Robert A. Skinner (202) 786-1840]

#### **Sugar and Sweetener Markets Tight**

Despite continued growth in world sugar production, faster growing consumption is chipping away at stocks and setting the stage for higher prices. Global consumption likely will exceed output in 1989/90 for the fifth straight year. As a result, global stocks by the end of the marketing year are likely to be the lowest since 1980/81.

The contraction in global stocks has already been reflected in stronger prices. Monthly average raw sugar prices have ranged from 9.7 cents a pound in January 1989 to 14.4 cents in October. Refined sugar prices have increased from 12.6 cents a pound in January 1989 to 22.5 cents in August, before dipping to 18.0 in October.

#### **Prices Could Dip Slightly**

The run-up in prices, particularly for refined sugar, reflects several factors:

- large purchases by Mexico and Indonesia,
- the unexpected entrance of the Soviets and India into the world market, and
- the lack of exports from Brazil—usually the world's second largest exporter of refined sugar.

With beet sugar output in Western Europe, the Soviet Union, and Eastern Europe likely better last fall, world refined sugar prices began to soften somewhat. Still, prices remained about 50 percent above a year earlier. Moreover, raw prices continued strong, averaging 15.2 cents a pound for the first 3 weeks of November.

The price softening likely is temporary. The stocks-to-use ratio at the end of 1989/90 is expected to be slightly under 17 percent, 2.3 percentage points below



1980/81, when prices averaged 22.4 cents a pound.

However, a further strengthening of world prices could choke potential increases in global sugar consumption, especially in developing countries such as China and India. Both are short of foreign exchange to supplement domestic supplies with higher priced imports. Also, higher prices could stimulate some further expansion in world sugar output in 1990/91.

The World Bank projects that global sugar output will increase an average of about 2 percent per year until 2000, thereby lifting production from a forecast 109 million tons in 1990 to 133 million in 2000. The bank foresees the bulk of growth coming from developing countries, via both expanded cane land and improved yields.

These forecasts, however, could prove too conservative if a breakthrough in technology or rapid diffusion of existing technologies occurs. The numbers also imply that countries should again assess their need for new milling capacity and for retooling existing plants.

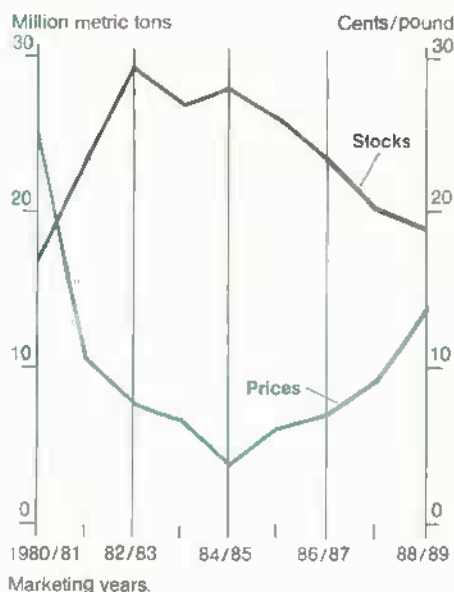
#### **Global Consumption To Creep Up**

Global sugar consumption is forecast to rise about 1 percent in 1989/90 to a record 108.1 million metric tons, raw value. Much of this increase comes from population growth in the developing world; sugar use totals in the U.S., Eastern Europe (including the Soviet Union), Western Europe, and Japan are either fairly stable or declining. World sugar consumption has grown at a fairly steady pace of about 2 percent a year over the past decade.

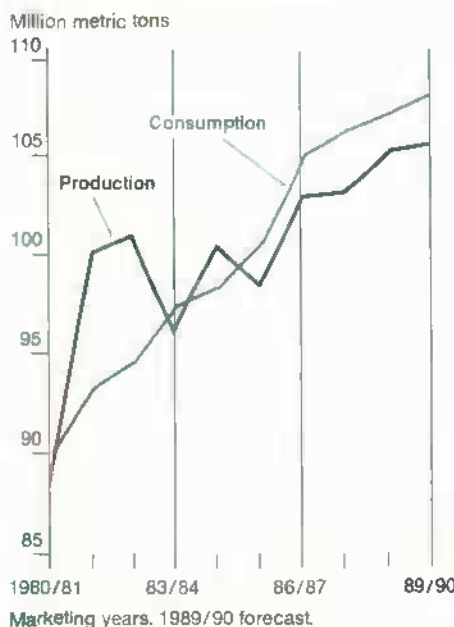
World sugar production in 1989/90 is forecast to reach a record 105.7 million tons, raw value, up slightly from the revised 1988/89 estimate, but 2.4 million tons less than consumption. Since mid-year, developments in several pivotal countries have been influencing the global market.

Brazil, for example, has been allocated the third-highest U.S. import quota, but has shipped only 51,860 short tons (20 percent of the allowed amount) and actually has sent no sugar since the end of July.

**With Climbing World Sugar Prices, Stocks In 1988/89 Were Lowest Since 1980/81**



**Global Sugar Consumption Ahead of Production for Fifth Straight Year**



For 1989/90, heightened Brazilian demand for cane to make fuel alcohol lowered the availability of cane for sugar. With a 1.5-percent increase in Brazil's own sugar consumption likely, its 1989/90 exports are expected to be at a 15-year low of 1.3 million tons.

One of the key decisions in Brazil will be how much cane to divert to fuel alcohol

production. Although the Brazilian government is attempting to moderate demand by reducing the alcohol content in gasoline, alcohol shortages could materialize in 1990. While Brazilian sugar exports were privatized in June, the authorization to export continues to reside with the government's Sugar and Alcohol Institute.

#### **World Sugar Markets Tight Amid Price Volatility**

USDA's forecast for global exports in 1989/90 is 28.3 million tons, about the same as a year earlier. Strong export demand and the failure of production to increase have cut stocks and boosted prices. Import demand growth has been especially brisk in Canada, Venezuela, India, and Malaysia.

Imports are expected to climb 2.2 percent from 1988/89. The 1989/90 outlook shows imports exceeding projected exports by 1.4 million tons. Strong demand is exacerbating the tightness in world supply.

Sharp gyrations in sugar prices are common; historically, high-price periods of 1 or 2 years have given way to longer periods of low prices. World raw sugar prices peaked this decade at 41 cents a pound during 1980 (second only to the historic high of 57 cents in 1974) and then fell to a low of under 3 cents a pound in mid-1985.

Prices are again on an upward trend, averaging 6.1 cents in 1986, 6.7 in 1987, and 10.2 in 1988. Prices in mid-November 1989 floated around 14.5 cents.

Increases in production capacity during the high-price phase of a sugar price cycle take several seasons to be absorbed by relatively steady but slow consumption growth. Processing facilities are expensive to construct and must be large to keep costs down.

Consequently, once plants are in place, owners are strongly inclined to utilize them fully to cover construction costs. After 6 to 10 years of low prices and slow demand growth, world sugar consumption typically catches up with processing capacity.

At this point, a disruption to production triggers an explosive price rise and the sugar price cycle begins anew. Since

1950, world sugar price spikes have occurred five times.

Some forecasters believe world prices are headed for another boom period soon. Although the world stocks-to-use ratio is low, other analysts counter that production is not yet pressing close to capacity, and believe that there is a comfortable margin for another 3 years or so.

Moreover, corn-based and low-calorie sweeteners are both substitutes for sucrose, and likely will dampen price run-ups. In addition, developing countries, with less money to spare, now dominate sugar import markets and are more sensitive to price rises.

Refined beet sugar is now a larger percent of total production and trade, with a faster supply response to production shortfalls than sugar cane. So, potential price peaks are likely to be lower and of shorter duration than in the past.

#### ***U.S. Market At Turning Point***

In the U.S., rising production had combined with declining consumption to squeeze imports fairly steadily after import quotas were introduced in 1982. Quota sugar imports dipped to less than 1 million tons in 1987/88. A modest recovery in consumption and a drought-reduced 1988 crop permitted imports to expand somewhat in 1988/89.

In late November, USDA increased the quota (for January 1, 1989, through September 30, 1990) by 272,915 metric tons, to 2.26 million tons, because of a production shortfall and unexpectedly low stocks.

U.S. beet and cane production for the 1989/90 sugar crop is now forecast to reach 7.0 million short tons, raw value, only slightly above last season's weather-reduced crop of 6.9 million. Cane sugar production is expected to reach 3.3 million tons. The expected record cane outturn in Louisiana is likely to be offset by a sharp contraction in Hawaii's crop, which suffered poor growing conditions.

Beet sugar output is forecast at 3.7 million tons, up only 163,000 from the 1988/89 drought-reduced crop. The beet crop was subject to unfavorable early summer growing conditions in the Red

River Valley of Minnesota and North Dakota.

#### ***Despite Slow Consumption Growth; Imports Will Continue***

USDA forecasts that 8.33 million tons of sugar will be consumed in the U.S. in 1989/90, 1.2 percent above the estimate for 1988/89. Per capita deliveries will reach 60.95 pounds (refined) annually, down almost 25 percent from 1980/81. The estimate does not include consumption of sugar imported in blends and mixtures.

U.S. sugar imports fell from nearly 5 million tons in 1980/81 to less than 1 million in 1987/88. With the slight recovery in deliveries and the short 1988/89 beet crop, the import quota has grown somewhat.

While USDA does not make official long-term projections, current assumptions on U.S. sugar production and consumption growth into the 1990's indicate that the U.S. will remain a substantial net sugar importer with continuation of current program loan rates.

#### ***Corn Sweetener Use Fell Slightly***

U.S. per capita consumption of corn sweeteners surpassed sugar in 1985, as lower priced high-fructose corn syrup (HFCS) replaced sugar, primarily in the soft drink industry. Per capita sugar use has about leveled off since then, while corn sweetener consumption has crept up further, based mainly on the increasing popularity of soft drinks.

Per capita consumption of corn sweeteners (HFCS as well as glucose and dextrose) likely declined slightly in 1989 to 69.3 pounds (dry basis), off from 1988's record 69.6 pounds.

USDA has no formal data collection system for low-calorie sweeteners. The department's working estimate, however, shows that U.S. per capita use has about tripled during the 1980's, and approaches 20 pounds per year (sugar-sweetness equivalent). The low-calorie share of the U.S. sweetener market has grown from about 5 percent at the beginning of the decade to 12-14 percent. [Peter J. Buzzanell (202) 786-1886]

#### ***Vegetable Growers Face Labor, Environmental Issues***

*The following vegetable outlook was prepared before below-freezing temperatures hit Florida and the lower Rio Grande Valley of Texas in late December 1989. The cold snap caused damage to vegetable crops that will lower production from prefreeze forecasts. Fresh vegetable prices will rise in the weeks ahead because of reduced supplies, but the availability of vegetables from other areas will moderate price increases.*

U.S. vegetable production for 1989 likely topped the drought-reduced level of 1988, largely because of a 29-percent increase in processing tonnage and a 3-percent gain in potato output.

Processing vegetable output reached nearly 15 million tons, while potato output was an estimated 367 million cwt. Output of fresh vegetables, mushrooms, sweet potatoes, and dry edible beans likely also rose.

Despite the big increase in U.S. vegetable output, the value of all U.S. vegetable imports probably rose about 5 percent, to a record \$1.7 billion. On the export side, even though U.S. vegetable prices were strong in 1989, foreign demand increased and likely boosted U.S. export value one-tenth from the \$1.4 billion of a year earlier, to a near-record.

#### ***Vegetable Use Will Continue Up***

Domestic per capita use of all vegetables rose to an estimated 336 pounds in 1988 from 335 the previous year, despite drought-reduced supplies. In general, increases in fresh vegetables, potatoes, and mushrooms offset declines in processed vegetables.

Fresh vegetable use reached 100 pounds per capita for the first time in 1988. Recent survey results indicate that consumers tie good health and nutrition with eating fresh vegetables. The respondents said they were eating more fresh vegetables at the expense of canned and frozen.

Fresh vegetable consumption likely will continue to outpace processed consumption in the 1990's, unless consumers' confidence in the safety of the fresh supply is further eroded.

## Growers Will Be Concerned About Food Safety, Farm Labor in the 1990's

Food safety issues have come to light more for fresh vegetables than for processed, and have shaken consumer confidence in fresh vegetables. Processed vegetables are subject to stricter food labeling laws. So, the fresh vegetable industry has been busy introducing its own labels, such as organic, low-input, and natural.

A recent survey shows that consumers are likely to pay more for products that are clearly and simply identified. Thus, consumers probably would be receptive to buying products labeled pesticide-free or pesticide-residue free.

In 1988, Congress amended the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to speed up the review of older chemicals. Because vegetables are considered "minor use" crops by pesticide manufacturers, previously registered herbicides, fungicides, and insecticides

may be dropped, since the review must be performed at manufacturers' expense. The list of chemicals already dropped is growing, a trend likely to continue.

In the 1990's, vegetable growers will be faced with tough choices among growing practices. Research efforts and public attention have recently focused on the use of alternative production techniques, including integrated pest management, low input sustainable agriculture, and organic production methods.

Vegetable and fruit growers are by far the heaviest users of irrigation, and they will be forced in the 1990's to address the issue of how to dispose of waste water laden with farm chemicals.

Farm labor availability also will command growers' attention during the 1990's. The Immigration Reform and Control Act of 1986 and a higher federal minimum wage are forcing growers, especially those with seasonal labor, to review their hiring practices.

## Vegetable Trade Deficit Likely To Narrow in 1990's

The annual value of vegetable imports during the 1980's rose nearly 8 percent, while exports rose 2 percent. However, deterioration has occurred in the reporting of exports to Canada, so the growth in U.S. fresh vegetable exports has been understated. U.S. vegetables are shipped primarily to Canada.

Several factors—more accurate U.S. export statistics, the lower trade barriers due to the U.S.-Canada Free Trade Agreement, and strong offshore demand for U.S. frozen potatoes—are all expected to help narrow the reported U.S. vegetable trade deficit. U.S. exports of frozen potatoes in 1989 through August ran 22 percent ahead of the year before.

Most U.S. vegetable imports come from Mexico. During the 1980's, the mix of vegetables imported changed. Now, Mexico is a major supplier of frozen

### Vegetable Production Jumped 14 Percent in 1989

		1988					1989					Percent change
Unit		I	II	III	IV	Annual 1/	I	II	III	IV	Annual 1/	1989/1988
<b>GROWER PRICES</b>												
Potatoes 2/	\$/cwt	3.81	4.33	5.21	5.29	6.02	6.67	8.51	7.58	5.50	6.50	8
Dry edible beans 2/	\$/cwt	14.67	18.77	26.77	30.13	30.30	31.30	31.97	28.27	24.50	24.00	-21
Commercial vegetables, prices received index	1910-14=100	806	611	703	698	705	823	834	709	618	746	6
Fresh vegetables, prices received index	1977=100	165	112	139	138	138	163	154	139	148	151	9
<b>WHOLESALE PRICE INDEXES</b>												
Fresh vegetables	1982=100	110	91	101	101	100	108	122	96	100	106	6
Potatoes	1982=100	104	112	113	103	108	164	155	147	134	150	39
Canned vegetables	1982=100	103	103	110	116	108	119	119	119	115	118	9
Frozen vegetables	1982=100	107	107	109	112	108	114	115	116	115	115	6
<b>RETAIL PRICE INDEXES</b>												
Fresh	1982-84=100	134	125	128	130	129	142	149	143	138	143	11
Potatoes	1982-84=100	106	116	128	127	119	139	165	172	152	157	32
Processed	1982-84=100	108	109	114	118	112	122	125	126	125	124	11
<b>PRODUCTION</b>												
Total vegetables 3/	1,000 cwt											14
Fresh vegetables	1,000 cwt											1
Processed vegetables	1,000 cwt											29
Mushrooms	1,000 cwt											6
Potatoes	1,000 cwt											3
Sweetpotatoes	1,000 cwt											7
Dry edible beans	1,000 cwt											25

1/ Annual prices for potatoes and dry edible beans are season average for crop year. 2/ Calendar quarters and season average. 3/ Includes fresh and processed.

Source: NASS and ERS, USDA; BLS, USDC.



broccoli, cauliflower, okra, fresh bulb and green onions, and processed tomatoes, in addition to fresh winter vegetables.

During the second half of the 1980's, as Mexico's economy rebounded, Mexicans bought more U.S. vegetables. The value of U.S. vegetable exports to Mexico in 1989 likely reached \$18 million, double 1988. Mexico's importance as a U.S. vegetable market is likely to grow in the 1990's.

#### **Fresh Vegetable Acreage Up Slightly**

Harvested acreage likely rose 4 percent in 1989 for the major fresh vegetables: asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, onions, tomatoes, and honeydews.

The preliminary USDA estimate of 1989 production for the major fresh vegetables is 253 million cwt, up 1 percent from 1988. Fresh vegetable production through 1995 likely will expand about 2 percent per year. This increase reflects expected growth in per capita disposable incomes and population.

Prices received by fresh vegetable growers probably rose 8-10 percent in 1989, partly because of bad weather. However, some of the increases can be explained by stronger foodservice demand for value-added vegetables, such as shredded lettuce.

As growers look into the 1990's, prices are likely to remain favorable because of the continued growth in value-added produce, increased exports, and the potential shifts in supply locations due to chemical restrictions. However, several factors, including more import competition and saturation of the organic vegetable market, could dampen price increases.

#### **Record Processing Production Contracted**

Processors' inventories were depleted in 1989 by the 1988 drought. Consequently, contract intentions and production reached a record 15 billion tons in 1989, up 29 percent from a year earlier. Processing tomatoes, the volume leader in the processing vegetable industry, realized a 31-percent gain in production. However, snap bean output soared 51 percent to 800,000 tons, sweet corn rose

25 percent, and green peas jumped 60 percent.

Contract price increases, combined with larger production, boosted growers' cash receipts.

#### **Potato Prices Strong, But Dry Bean Prices To Fall**

Total 1989 potato production rose 3 percent to 367 million cwt from 1988's drought-reduced level. First indications of the fall output place it 3 percent above 1988's 314 million cwt, but below the traditional volume following a year of strong prices.

Grower prices for potatoes rose 47 percent during 1989. Fall potato output was lower than expected as incentives to plant other crops were very strong. Bad weather in the Red River Valley, Idaho, and Washington reduced fall output in regions heavily devoted to processing.

Since processing demand is strong in the 1989/90 season, and 1989 fall output rose only moderately, prices of potatoes at all levels will remain high. Grower prices for 1989/90 likely will average near the \$6.02 per cwt of the 1988/89 season.

For dry edible beans, estimated 1989 production was 25 percent higher than the previous year's drought-reduced crop of 19 million cwt. Grower prices for the 1989/90 season likely will average one-fifth lower than the \$30 per cwt for 1988/89.

Projections of dry edible bean output for the next decade show a yearly increase of about 1 percent. Factors behind the gain are stronger demand for high-nutrition commodities and increased diversification of program-crop farmers who have expertise in bean production.

#### **Organic Vegetable Production Likely To Gain in 1990's**

Even though no national estimates exist for organic production, consumer concerns about produce safety have led to greater organic supplies. Information from national organic wholesalers shows that much of the supply originates in California, though the continued strong price differential between organic and nonorganic has stimulated growers in other

areas to allocate acreage to organic vegetables.

As market niches become saturated and legislation is enacted to standardize organic production and labeling requirements, price differentials between organic and nonorganic vegetables likely will decline. [Shannon Hamm (202) 786-1886]

#### **Fruit Prices Strong**

*The following fruit outlook was prepared before severe cold hit citrus areas of Florida and Texas in late December 1989. Oranges and grapefruit were damaged by low temperatures, and output will fall below prefreeze forecasts, which already were below 1988/89 production.*

*Growers will salvage as many of the frozen oranges for processing as possible. It will be several weeks before the industry can determine how much output will be lowered and whether there was tree damage that could reduce production in future seasons.*

Demand for fruit and tree nuts was strong in 1989, despite generally shorter supplies and higher prices. The situation is not likely to change much in the near future, given the growing domestic economy and favorable exchange rates between the dollar and the currencies of several major U.S. trading partners.

The fruit industry expects smaller supplies of many noncitrus and citrus fruits in 1989/90 because of various weather and disease problems that plagued growers in some areas.

Production of the major noncitrus fruits likely is up only fractionally from 1988/89. Larger crops of apples, apricots, cherries, prunes, and plums just offset smaller crops of grapes, nectarines, peaches, pears, and strawberries.

All citrus crops taken together are expected to be smaller, with most of the production shortfall forecast for Florida, the largest producing state. In addition, crops probably were smaller for almonds, pecans, hazelnuts, and pistachios, and the 1989 walnut crop likely posted only moderate gains.

## Per Capita Consumption Down

Expected smaller citrus supplies and strong demand will keep upward pressure on prices for most fresh citrus commodities. Similarly, with shorter supplies and heavy demand for several noncitrus fruits and tree nuts, those prices are also expected to remain above 1989. Apples are an exception because the recent large crop likely will keep prices low.

Per capita fruit consumption may have been down moderately in 1989 because of the smaller domestic fruit supplies and higher prices. Per capita consumption was an estimated 211 pounds (fresh weight equivalent) in 1988.

## Citrus Crop Down 10 Percent in 1989/90

The early October forecast of the 1989/90 U.S. citrus crop placed total production (excluding grapefruit in California's "other areas") at 11.7 million short tons, down 10 percent from a year earlier and 29 percent off 1979/80's record.

The forecast drop largely reflects the damage to Florida groves caused by freezing weather last February. Florida citrus production is expected to reach 8.1 million short tons, 14 percent below a year ago.

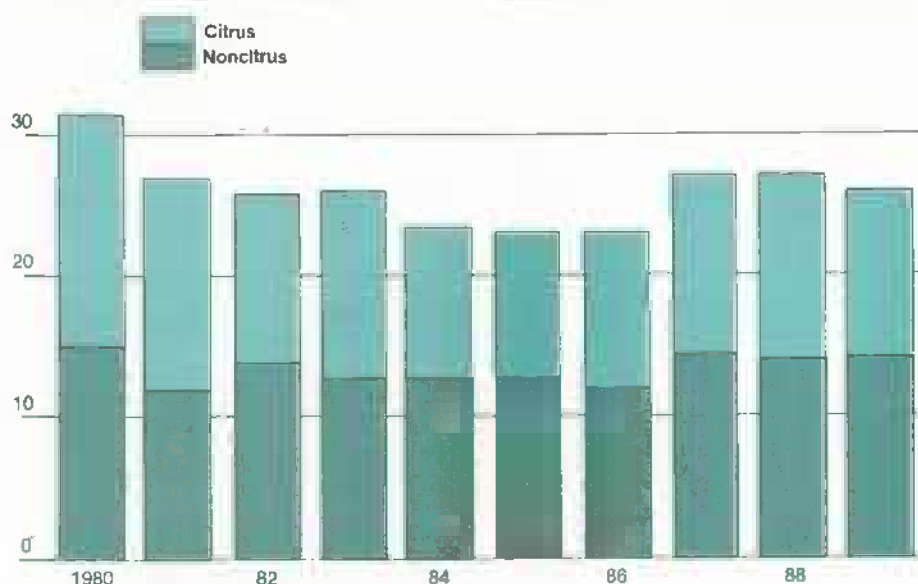
Prospects for the 1989/90 orange season point to a smaller domestic crop of processing oranges and a larger crop for the fresh market. In Florida, where about three-quarters of the total U.S. orange crop is produced, the 1989/90 crop is forecast at 5.9 million short tons, down 11 percent from 1988/89.

Nonetheless, Florida growers are not likely to see a corresponding increase in prices during this marketing season because of rising imports of frozen concentrated orange juice (FCOJ) from Brazil. World orange juice supplies are expected to be up 6 to 8 percent from a year earlier, with Brazil forecast to produce a record 307 million gallons (42 degrees Brix).

Consequently, the Florida Department of Citrus estimates that on-tree prices for Florida growers will average \$5.89 a box in 1989/90, down 19 percent from a year earlier.

## U.S. Fruit Production: Citrus Down, Noncitrus About Flat In 1989

Million tons  
40



## U.S. Citrus Production Down Again

Commodity	1979/80	1988/89	1989/90	Change from	
				79/80-89/90	88/89-89/90
	1,000 tons			Percent	
Oranges	11,832	8,878	8,274	-30	-7
Navel 1/	6,658	5,186	4,627	-31	-11
Valencia	5,174	3,692	3,647	-30	-1
Grapefruit	2,986	2,861	2,231	-25	-22
Lemons	789	759	749	-5	-1
Tangelos	288	171	158	-45	-8
Tangerines	275	239	197	-28	-18
Temple	270	169	135	-50	-20
Total	16,440	13,077	11,744	-29	-10

1/ Includes early and midseason varieties. 2/ Excludes California's other areas.

Source: Crop Production, NASS, USDA (November 1989).

## U.S. Production of Selected Noncitrus Fruit Turned Up

Commodity	1987	1988	1989	Change from	
				1987-89	1988-89
	- - - - 1,000 tons - - - - -			- - - Percent - -	
Apples	5,374	4,579	4,814	-10	5
Apricots	115	102	118	3	16
Cherries	394	304	315	-20	4
Grapes	5,264	5,986	5,879	12	-2
Nectarines	191	200	190	-1	-5
Peaches	1,195	1,310	1,138	-5	-13
Pears	940	861	842	-10	-2
Prunes/plums	979	750	866	-22	15
Strawberries	556	563	533	-4	-5
Total	15,008	14,655	14,695	-2	0.3

Source: Crop Production, NASS, USDA (November 1989).

The Pacific Rim countries continue to be strong markets for U.S. fresh oranges, with Japan and Hong Kong alone accounting for 60 percent of exports during the first 10 months of 1988/89, up 3 percent from the same period in 1987/88.

Japan is the largest single market, but exports to Hong Kong are growing at a much faster rate. Hong Kong likely is a major transshipment point for other Pacific Rim nations.

The 1989/90 U.S. grapefruit crop, excluding production in California's other areas, is forecast at 2.2 million short tons, 17 percent below the previous season. Reflecting the significantly smaller crop, early season f.o.b. prices have ranged higher than last season and are likely to remain strong.

Domestic lemon supplies will continue to be tight during 1989/90. Production (tree crop available for harvest) is expected to be 749,000 short tons, down 1 percent from last season and down almost 5 percent from 1987/88.

#### *Noncitrus Output To Rise Slightly*

Supported by continuing good crop conditions in the Western states, the final forecast for the 1989/90 U.S. apple crop is 9.63 billion pounds, up 5 percent from 1988/89. With a record crop expected by the industry in Washington state, shipping point prices in many areas are sharply lower than last year.

In early November, a group of 17 grower-owned marketing cooperatives in Washington agreed to set a floor price of \$9.00 per box for the apples they market this year. Although the floor is below the \$10.00 breakeven price estimated by the group, the cooperatives believe that the collective effort will help curtail declining grower prices and stabilize the apple market without pushing up retail prices.

The group of cooperatives is estimated to account for 28 percent of Washington apple production this year.

The 1989 U.S. grape crop was near 5.88 million short tons, 2 percent below the previous year but 12 percent larger than 1987. Smaller crops of table and wine-type grapes in California more than offset a larger crop of raisin-type grapes. Heavier shipments of table grapes through early October and lower cold

storage stocks likely will lead to a tighter market as the season progresses.

#### *Industry Faces Food Safety Issues*

Issues confronting the U.S. fruit and tree nut industries in 1989/90 will include packaging and nutritional labeling regulations, as well as labor and water availability. But the biggest uncertainty will center around food safety.

Ultimately, U.S. fruit and tree nut producers are likely to see a decreasing number of chemicals registered for use on fruits and tree nuts. This means growers will have to modify traditional production practices to replace or limit chemical use. [Katharine C. Buckley (202) 786-1883]

#### **Tobacco Outlook: Declining Production After 1990**

Tobacco production in the U.S. may rise for the fourth consecutive year in 1990, bringing output and use in line. But after 1990, U.S. production may begin to decline. The slide in domestic cigarette consumption may more than offset rising cigarette and leaf exports, and result in declining leaf use.

Continued large hikes in cigarette prices, prospects for higher taxes, health concerns, more and more smoking restrictions, and antismoking activities will almost surely lead to further reductions in domestic cigarette consumption. Cigarette consumption may fall an average of 2 to 3 percent a year over the next several years.

Compared with a year earlier, U.S. flue-cured and burley prices are up. Prices are higher because support levels rose, the 1989 crop is of relatively good quality, and supplies are tightening. Prices for 1990 as a whole are difficult to predict, and they depend heavily on the quality of the summer crop and whether the drop in domestic cigarette consumption moderates.

After declining in 1988/89, use may rise a little in 1989/90. U.S. production in 1989 went up about 7 percent from the preceding year. However, even with larger production, lower carryin stocks cut supplies about 2 percent to 4 billion pounds, with decreases in nearly every type.

#### *U.S. Cigarette Output Declining, Exports Up*

Despite an increase in cigarette exports, U.S. output probably fell to 685 billion pieces in 1989, about 10 billion below 1988. U.S. cigarette consumption likely fell about 4 percent in 1989.

Wholesale cigarette prices rose in December 1988 and again last June. For the last 7 years, manufacturers have raised wholesale prices 3 to 6 percent at about 6-month intervals; prices rose about 10 percent during the past year. Retail prices have risen 6 to 13 percent a year, faster than overall consumer prices.

As prices have gone up, sales have climbed for generic and value-priced cigarettes (15 to 50 percent less expensive than standard brands). They now account for over a tenth of U.S. cigarette sales.

Antismoking activity, including legislation, continues to affect the industry. Forty-two states either prohibit smoking in certain places or segregate smokers from nonsmokers. Fourteen states regulate smoking in the workplace of both private and government employees, and 27 states regulate smoking in government workplaces.

#### *For Other Products, Consumption Mixed*

Consumption of large cigars likely declined about 1 percent to 2.5 billion in 1989. Production of little cigars—those weighing less than 3 pounds per 1,000—probably fell also, after rising for 2 years. Large cigar consumption in 1990 is expected to continue trending down.

Smoking tobacco consumption likely dropped to 19 million pounds in 1989, about 13 percent below the previous year. Consumption of chewing tobacco probably has fallen too. Both smoking and chewing consumption are likely to slip again in 1990.

Consumption of chewing tobacco continues to be hurt by price hikes, health-related publicity against smokeless products, rotating warning labels, a ban on radio and television advertising, and a federal excise tax.

Snuff consumption may have risen in 1989. An increase in moist consumption is more than offsetting a decline in dry



snuff. Snuff consumption may go up again in 1990.

### **World Production Rose in 1989**

World tobacco production in 1989 is estimated at 15.7 billion pounds (farm-sales weight), up 6 percent from 1988. The larger production was mainly due to hikes in the U.S., Brazil, Malawi, Zimbabwe, China, and India. Production may have been lower in Turkey, Mexico, and Japan.

In 1988, 5.25 trillion cigarettes were produced worldwide, 2.5 percent above a year earlier. Although consumption is stagnant or declining in the U.S., Western Europe, Canada, and Japan, increased consumption in China probably pulled up global output again last year. China produced 1.53 trillion cigarettes in 1988, 6 percent above a year earlier.

World leaf exports in 1989 probably rose again, after climbing 7 percent in 1988 to 3.3 billion pounds. U.S. leaf exports were up 12 percent in 1988. U.S. leaf exports through October were below a year earlier, but calendar 1989 exports may have been up.

Zimbabwe also may have exported more tobacco in 1989. However, Brazil's exports may have declined.

### **U.S. Tobacco Crop Bigger**

U.S. tobacco production rose in 1989 because of larger acreage; some yields were lower. With higher support prices and stronger demand, flue-cured auction prices averaged above a year earlier. Flue-cured cash receipts from the 1989 crop were up about 9 percent.

Production costs were higher, but the no-net-cost federal assessment charged producers was unchanged at 1 cent per pound (excluding the .12-cent budget deficit assessment, which was slightly lower). The no-net-cost assessment covers the cost of operating the USDA tobacco program.

Price supports for all kinds of tobacco were higher in 1989. Cash receipts from the 1989 burley crop likely increased 15 to 20 percent.

Supplies of burley, which have declined since 1984, now represent about 2.6 years' use. The 1989/90 supply is about 2 percent below last season. Carryover stocks in early October were 9 percent below a year earlier because use exceeded 1988 production. The 1989 crop may have increased 14 percent from the previous year's. Acreage was up 13 percent and yields were a little higher.

For flue-cured tobacco, domestic disappearance during 1989/90 may decline a little, largely reflecting reduced domestic cigarette consumption.

Flue-cured exports fell last season but may rise in 1989/90 because U.S. prices have been lower. Also, the crop is larger and of good quality. Despite some strengthening recently, the dollar continues relatively weak, and this also should boost U.S. export prospects.

However, export gains may be only modest because of several factors:

- stagnant or contracting cigarette consumption in major importing countries,
- reduced leaf use per cigarette,
- quotas and tariffs that discriminate against U.S. tobacco, and
- sufficient world supplies.

During the year ending September 30, 1989, burley disappearance totaled 577 million pounds, 9 percent below the previous year. Domestic use fell, but exports were up. Exports rose largely because of the better quality 1988 crop.

Total use of burley may increase in 1989/90. Both domestic use and exports may rise a little.

The basic flue-cured quota has been cut for 1990, but the basic burley quota likely will be raised. The effective flue-cured quota went up and the effective burley quota probably will increase. A tightening market is behind the expected changes in burley quotas. [Verner N. Grise (202) 786-1890]



## **World Agriculture and Trade**

### **Ag Exports To Slip 4 Percent in 1990**

USDA expects U.S. agricultural exports in fiscal 1990 (October-September) to recede 4 percent from a year earlier to \$38 billion; total volume is forecast to edge slightly lower, and prices are expected to weaken moderately.

The recovery from droughts around the world in 1988 and 1989 is driving the outlook changes. Season-average prices for coarse grains and oilseeds are expected to fall from their drought-induced highs. Wheat export volume is dropping primarily because of the recovery in production abroad, tight U.S. supplies, and a fall in global wheat trade.

Generally, the drop in exports is confined to bulk products—in both volume and value terms. In contrast, U.S. high-value exports are expected to set another record, possibly reaching \$17 billion. Nonetheless, growth in high-value exports likely will weaken because of less favorable moves in exchange rates and slower overseas economic growth.

U.S. agricultural imports are forecast to drop to \$21 billion in 1990, \$500 million below fiscal 1989's record. The U.S. agricultural trade surplus is expected to narrow slightly to \$17 billion. The surplus topped \$18 billion in 1989, the highest in 4 years and more than triple the

1986 surplus. Fiscal 1990 probably will be the first year since 1986 in which both exports and the surplus drop.

### **Coarse Grain Exports To Grow**

In coarse grains, the volume of world trade has grown 13 percent over the last 4 years, and it is forecast to rise around 4 percent in fiscal 1990. The U.S. may get close to half of the growth, perhaps about 2-1/2 million tons, on top of the 61 million exported in 1989. This would be the largest U.S. export volume since 1981.

The Soviet Union is driving much of the growth. Soviet corn imports from all sources are projected to rise another 1.5 to 2 million tons in 1990, despite a larger domestic crop.

But prices are likely to be down. USDA forecasts call for a 49-percent increase in U.S. coarse grain production and a 1-percent increase in foreign production in 1989/90. Consequently, lower prices probably will offset the higher export volume, resulting in a decline of about 10 percent in the value of U.S. coarse grain exports.

In wheat, world trade volume is likely to be steady to down slightly. With demand stagnant, U.S. wheat exports may drop 4.75 million tons, as Canadian and Argentine exports rise. For the second straight year, the EC is expected to be the U.S.'s largest export competitor.

With the U.S. wheat crop up an estimated 13 percent in 1989/90 and foreign output up 5 to 6 percent, world production could set a record. Among major markets, significant production increases are expected in India, China, and the USSR.

Among competitors, sharp output increases are projected for Canada, Argentina, and the EC. Greater Soviet production is expected to result in total wheat imports of only 12 million tons, the lowest USSR purchase volume since 1979/80.

### **U.S. Oilseed Exports Held Down by Competitors**

A very large Southern Hemisphere soybean crop is likely to limit exports of U.S. soybeans and soymeal. The Argen-

tine soybean crop probably will recover after last year's drought, and another good crop is expected in Brazil. U.S. soybean exports may rise 11 percent in volume, but South American producers will record a bigger increase.

U.S. soybean production rose by about 25 percent in 1989/90, and foreign production by a forecast 4 percent. The recovery likely will mean sharply lower prices than last season, bringing down the value of U.S. soybean exports, even as sales volume expands.

Overall, U.S. oilseed exports may decline more than \$1 billion from 1989's \$6.8 billion.

USDA projections suggest that U.S. export volume of cotton may rise 10-15 percent in fiscal 1990, despite the much smaller U.S. harvest than a year earlier. At the same time, foreign export volume will decline. So, the U.S. share of world cotton exports during the marketing year could jump to 31 percent, well above last season's 24 percent.

Cotton prices will be held up by tight global markets, spelling a very sharp increase in U.S. export value. However, competition will intensify considerably in the spring, as Southern Hemisphere producers harvest larger crops to take advantage of the strong market.

In the high-value category, U.S. livestock, dairy, and poultry exports are expected to match last year's record \$6.6 billion. Increased beef exports to Japan take much of the credit. Likewise, horticultural product exports are projected at a record \$4.4 billion, bolstered by larger sales of fruit, vegetables, tree nuts, and wine to the Pacific Rim.

Even with several successive records, the U.S. continues to lag well behind the EC in exports of high-value and consumer-ready products. The U.S. accounts for a third of world trade in bulk agricultural products, but the share is less than 10 percent for high-value products.

Foreign subsidies and trade barriers in part account for the low U.S. share of global high-value markets. But historical trade links among other countries and U.S. food manufacturers' preferences for locating production abroad rather than shipping final output also play a role.

### **Soviet Sales Will Nearly Match 1989 Record**

U.S. exports to the Soviet Union in 1990 may nearly match last year's record. A decline in the export value of U.S. grains and oilseeds will probably be balanced by record sales of meat and dairy products.

The USSR is the world's largest grain importer. The U.S. share of total Soviet grain imports—at 18 percent just 3 years ago—was close to 60 percent in fiscal 1989. As U.S. competitiveness and bilateral relations have improved, the Soviets have turned to the U.S. for a larger proportion of their imports.

U.S. agricultural exports to the Soviet Union reached an all-time high in fiscal 1989—\$3.3 billion. So the Soviets have become the second largest single-country market for the U.S. after Japan.

Although Soviet wheat imports will be down in 1990, the USSR is expected to account for 24 percent of total world coarse grain imports. U.S. corn exports to the Soviets probably will at least equal last year's record of 16.3 million tons.

After more than doubling to \$1.5 billion in fiscal 1989, U.S. agricultural exports to China may decline to perhaps \$1.2 billion—still the second largest U.S. sales figure to China in more than a decade.

U.S. agricultural exports to Japan are expected to hold fairly steady this year, at around \$8.2 billion. U.S. beef exports to Japan, which rose nearly 60 percent in fiscal 1989, likely will keep expanding in line with the U.S.-Japan beef-citrus agreement. U.S. pork and poultry exports also are likely to grow.

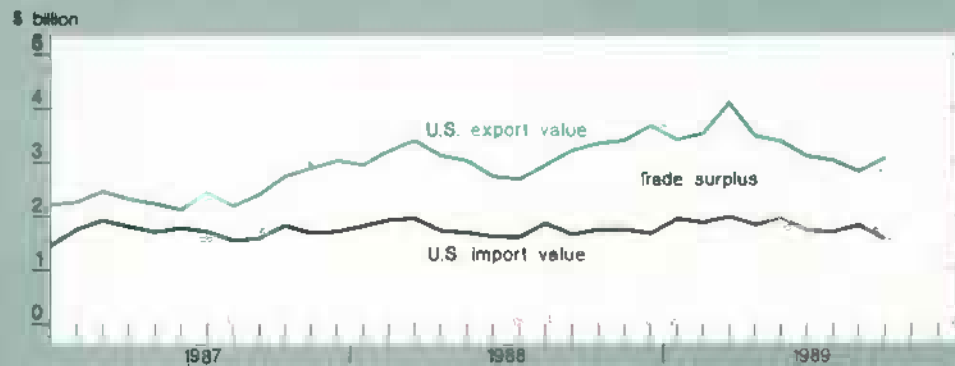
U.S. exports to South Korea are projected to increase for the fourth straight year in 1990, perhaps reaching a record \$2.5 billion. U.S. beef exports to Korea rose nearly 600 percent in 1989, as the Koreans began to open up their market.

U.S. exports to the EC are likely to decline by \$500 million this year, largely reflecting lower soybean and meal prices.

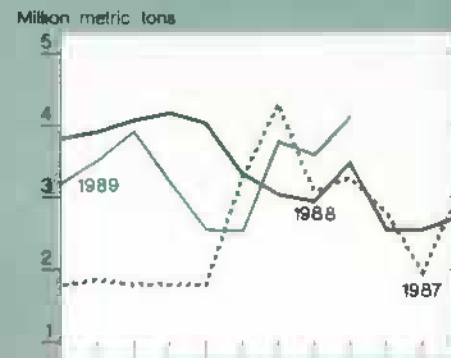
In fiscal 1989, U.S. agricultural exports to Eastern Europe slumped to their lowest in a decade—\$422 million. USDA expects to see a moderate recoup this year. Much of it will be food assistance

# U.S. Agricultural Trade Indicators

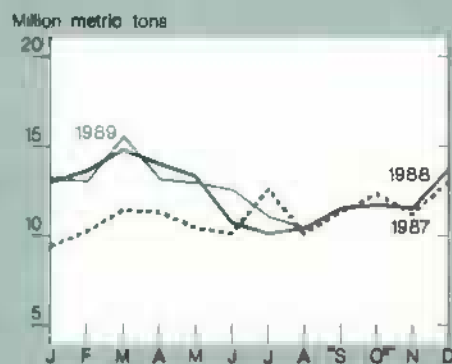
U.S. agricultural trade balance



U.S. wheat exports



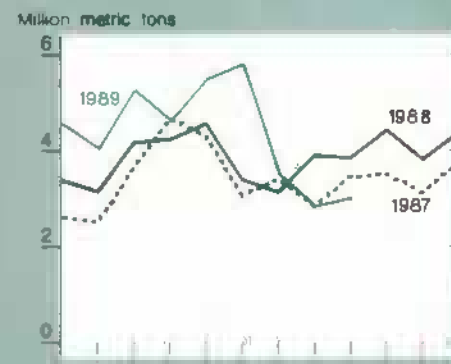
Export volume



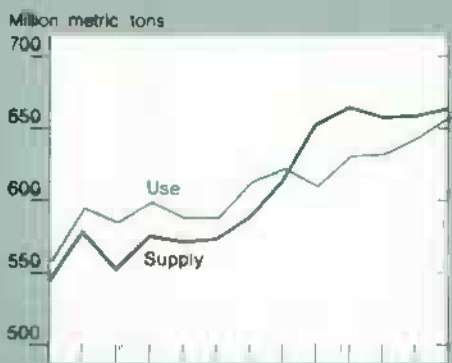
Index of export prices



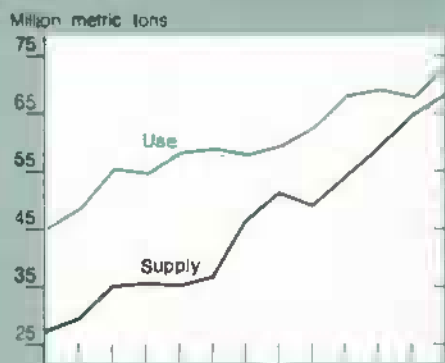
U.S. corn exports



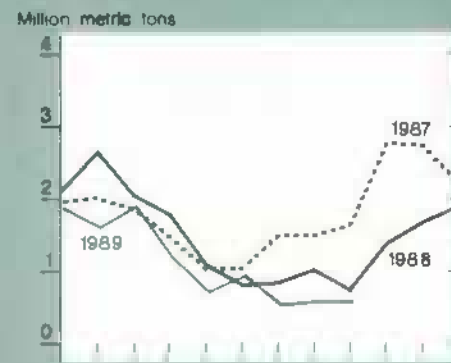
Foreign supply & use of coarse grains



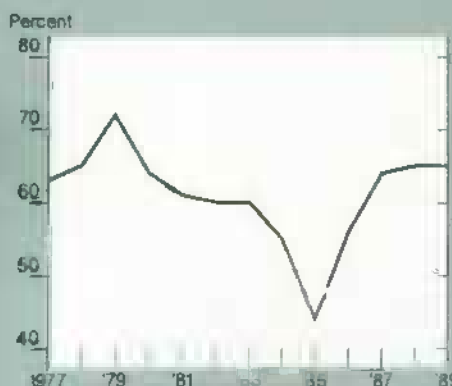
Foreign supply & use of soybeans



U.S. soybean exports



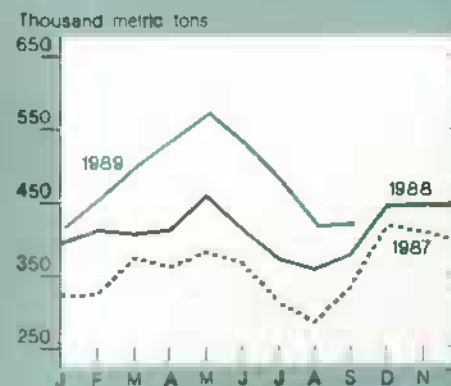
U.S. share of world coarse grains exports<sup>1,2</sup>



U.S. share of world soybean exports<sup>1,2</sup>



U.S. fruit & vegetable exports<sup>3</sup>



<sup>1</sup>Excluding intra-EC trade <sup>2</sup>October-September years.

<sup>3</sup>Includes fruit juices



to Poland under P.L. 480 and other concessional programs. Commodities shipped will include corn, sorghum, rice, butter, soybean oil, pork bellies, and cotton.

U.S. agricultural exports to Eastern Europe exceeded \$2 billion back in the early 1980's, when large amounts of credit were extended. Debt and lack of hard currency earnings are now a barrier to trade, but the latent demand is still there. [Steve MacDonald (202) 786-1827]

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## Farm Finance

### Steady-State Farm Financials

The outlook is for stable farm financials in 1990. Stability reflects several factors that tend to offset each other: higher crop production but lower prices, higher expenses for growing crops but lower feed bills, higher total receipts but lower government payments.

Farmers' net cash income likely will exceed \$50 billion for the fourth consecutive year, up 2-4 percent from 1989. With cash income in the mid-\$50 billion range, most farmers again will make financial progress in 1990.

However, net farm income may drop 2-5 percent, reflecting softer prices in the fall. The lower prices will dampen the dollar value of the fall harvest. Net farm income measures the value of agricultural production in a calendar year plus government payments, less all costs. In contrast, net cash income focuses on the value of commodities sold in a calendar year plus government payments, less cash costs.

#### *Incomes Improve Over Mid-1980's, But Some Trouble Spots Remain*

Even though net farm income is expected to drop in 1990 from a year earlier, when adjusted for inflation it would be up more than 50 percent since 1982. More-

over, farm assets and debts now tend to be in stronger hands than a few years ago, when fewer farmers had a financial cushion.

Farmers' equity could jump about \$30 billion, because land prices are forecast to rise 4-7 percent in 1990. In inflation-adjusted terms, land values will be stable. By the end of the year, USDA projects that farmers will have recovered nearly two-thirds of the equity they lost in the mid-1980's. This \$150-billion equity recapture illustrates the breadth of the recent farm recovery.

However, several negatives still cloud this outlook:

- Crop prices are likely to average 10-20 percent lower for feed grains and oilseeds in 1990, which could result in a cost-price squeeze for some cash grain farmers.
- About one of every ten commercial farmers remains financially vulnerable. Unanticipated weakening of the farm economy could jeopardize the weaker producers' survival.
- Farmers remain critically dependent on government commodity programs, indicating that U.S. agriculture has not fully regained its competitive edge.

### *Red Meat Producers To Hold Onto Gains*

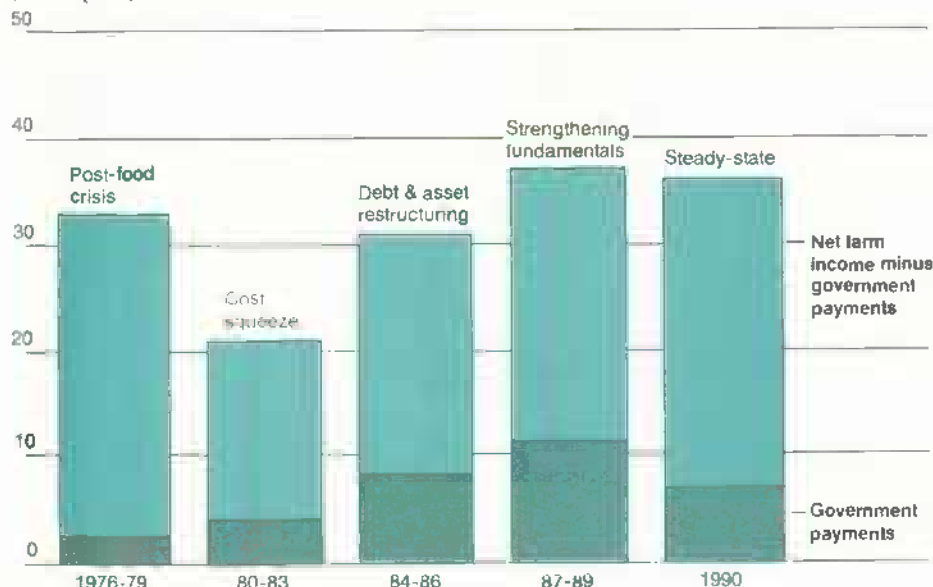
Hog prices could rise by as much as 4 percent, and cattle prices are expected to float up by 1-3 percent. So, 1990 may be another profitable year for the livestock sector. Livestock receipts are forecast to stabilize at the 1989 record of \$82 billion.

The combination of slightly higher red meat prices and lower feed expenses will make the red meat complex the major profit center in 1990. Cattle and hog sales totals each could grow by \$250-\$500 million, resulting in record red-meat sales of \$47-\$48 billion.

Dairy and poultry industries may see weaker profits as dairy prices fall 7-9 percent and poultry prices plunge as much as 9-12 percent. Because of lower prices, dairy sales could drop \$1 billion from 1989's record.

## Real Net Farm Income Stabilizes; Government Payments Fall

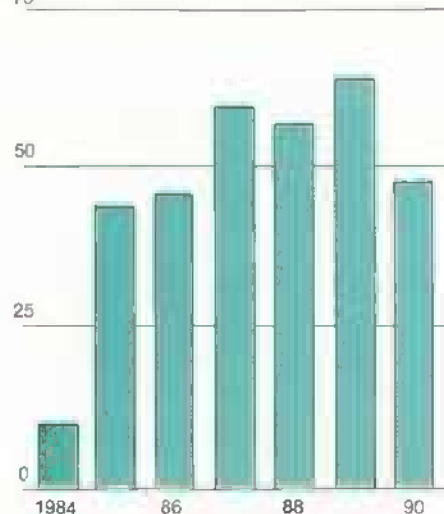
\$ billion (1982)



1990 forecast.

## Share of Commercial Corn Farms That Can Afford To Buy Land Rose in Late 1980's\*

Percent



\*25-percent downpayment. 1990 forecast.

## Higher Production Leading to Record Crop Sales

Farmers may sell \$3-\$4 billion more wheat and feed grains in calendar 1990. Fifteen-percent growth in crop receipts would boost sales to a record. Crop production is forecast to be 20-25 percent above drought-affected 1988. At the same time, 5-10 percent lower crop prices are a concern to farmers seeking to continue their rebound.

The impact of price weakness is best illustrated by soybeans. Receipts in 1990 are likely to be \$2 to \$3 billion lower than 2 years ago because average annual soybean prices have fallen 25 percent.

With very low stockpiles, wheat and cotton are currently the strongest crop commodities. Sales are likely to be more than \$500 million higher for cotton and more than \$1 billion higher for wheat in 1990.

With corn yields 30 bushels per acre greater in 1989, further increases in 1990 could result in corn sales of nearly \$13 billion. This would be 50 percent over sales in 1987, when prices averaged only \$1.55 per bushel, compared with the \$2.00-\$2.25 projected for 1990.

## Commodity Sales Could Top \$160 Billion

The combination of record-high crop sales and record-tying livestock sales is projected to raise total agricultural sales by \$2-\$4 billion in 1990, to \$160-\$163 billion. Since 1987, sales growth has been the engine of the farm economy's recovery. Almost all farm enterprises have shared in the growth, resulting in a more evenly balanced recovery.

Soybeans and hogs are the only major commodities projected to have

unchanged or lower sales in 1990 than in 1987, the first year of broad-based recovery. But, hog profits were record-high in 1987, and soybean profits were near the record in 1988. Thus, leadership of the recovery in profits has rotated during the 4 years, enabling finances to improve broadly.

Direct government payments to farmers are forecast to fall by \$1 billion or more this year, as disaster assistance declines from nearly \$3 billion in 1989 to less than \$1 billion. But, lower corn prices and softening wheat prices mean deficiency payments to those growers will jump nearly \$2 billion.

Recent price strength in cotton and rice will shrink payments for these commodities by about \$1.5 billion in 1990. The combination of lower rice, cotton, and disaster payments will more than offset higher wheat and feed grain deficiency payments in 1990.

Net government outlays to farmers, including Commodity Credit Corporation transactions, will comprise about 6 cents of every dollar of gross income farmers collect this year. This is half as much as in 1987, and about in line with the 1960's average. Nearly 20 percent of net government outlays will be directed to soil and water resource conservation programs.

Yet, government subsidies remain unusually high for the fourth consecutive year of a recovery. If the 1990 farm bill continues to lower target prices in the spirit of the 1985 farm bill, government payments could continue falling and impose financial strains on vulnerable operators in the years to come.

## Lower Feed Costs Keep Expenses Stable

One of the most positive trends in the financial outlook is a flattening in farm expenses. A 15-percent projected decline in feed costs will offset 2-4 percent increases in fertilizer, fuel, repair, and depreciation costs. Cash expenses are forecast at \$119-\$122 billion in 1990, about even with 1989's \$121 billion.

Interest expense is projected to be stable at \$15 billion for the fourth consecutive year, illustrating farmers' more conservative approach to the use of debt after the mid-eighties crunch.

Strict cost-control measures continue to pay dividends to farmers, resulting in higher incomes than if expenses had continued to rise \$7-\$8 billion annually. While commodity receipts are projected to be about \$25 billion higher in 1990 than in 1985, cash farm expenses likely will have risen only \$1-\$2 billion.

#### **Farm Asset Growth Continues, Debt To Rise**

By the end of 1990, USDA expects that U.S. farm assets (excluding operator households) will be worth \$880-\$890 billion, up more than 4 percent from a year earlier. The value of farm assets likely reached \$849 billion at the end of 1989, up 4.8 percent from 1988.

Boosted by relatively high returns, the value of farm real estate assets increased by an estimated \$40 billion in 1989, accounting for most of the growth in farm asset values.

Non-real estate asset values are forecast to rise by \$2 billion to \$200-\$205 billion. The anticipated 1-percent increase is due to higher expected values of farm machinery and equipment, farm financial assets, and livestock and poultry. Crop inventory values are forecast to drop by about \$1 billion.

As land values continue to strengthen, lenders may become less concerned with the likelihood of eroding loan collateral values. Farmers may become somewhat more willing to incur debt to purchase land, and currently indebted farmers may refinance short-term debt over a longer period.

As a result, farm borrowing likely will inch up by \$1-\$2 billion in 1990. The estimated \$1-billion drop in total debt during 1989 likely marked the end of a 6-year trend of debt retrenchment.

As farmers demand slightly more credit, loans made by the Farm Credit System should increase by about \$1 billion in 1990, the first annual increase since 1982. Farm loans made by commercial banks should increase about \$2 billion; bankers are awash in funds and most say they are willing to boost agricultural lending.

#### **Livestock Receipts To Remain Stable...**

	1988	1989	1990
		\$ billion	
Total	79	83	80-83
Cattle	36	37	37
Dairy	18	19	18
Poultry	13	14	14
Hogs	9	9	10

#### **...While Crop Receipts Will Set a Record**

	1988	1989	1990
		\$ billion	
Total	73	75	77-80
Corn	10	11	13
Soybeans	12	11	10
Wheat	6	7	8
Cotton	5	5	5
Fruit/veg.	19	19	19

#### **With Farm Expenses Expected Flat...**

	1988	1989	1990
		\$ billion	
Total	132	141	139-142
Feed, seed, calves	37	41	38
Fertilizer, chemicals, fuel	18	22	23
Interest	15	15	15
Depreciation, rent	29	30	31
Repair, labor, other	32	34	35

#### **...Farm Income Will Be Stable As Well**

	1989	1990
		\$ billion
Net cash income	53	52-57
Receipts	158	160-163
Direct payments	11	8-11
Cash expense	121	119-122
Net farm income	48	44-49
Inventory change	6	1-3

Other farm credit developments include the following:

- The final standards for qualifying loans to be sold through the new secondary mortgage market (Farmer Mac) should be determined by early 1990.
- Commercial banks are now the leading farm lender; they hold over one-third of all farm debt. The Farm Credit System, the previous leader, now holds approximately one-fourth.

- Farmers Home Administration debt levels could decline by as much as \$4 billion during 1990, depending on how fast delinquent loans are restructured or written off.
- Farm debt held by life insurance companies is expected to be relatively stable through 1990. Their new lending will continue to shift away from the Midwest and toward the more diversified agricultural economies of the Southeast and West.



### While Farm Equity Continues To Improve...

Year	Assets	Current \$ Debt	Equity	Assets	Deflated \$ (1982) Debt	1/ Equity
	\$ billion					
1987	765	143	622	652	122	530
1988	810	138	672	668	114	554
1989*	849	136	713	670	108	563
1990*	880-890	134-140	740-750	668-678	101-107	563-573

1/Deflated by the GNP implicit price deflator, 1982=100.

\*Forecast.

### When Combined With Stable Income, Higher Equity Means Lower Rates of Return

Year	Income	Return to assets		Income	Return to equity	
		Real capital gains 1/	Total		Real capital gain	Total
1988	4.5	3.0	7.5	3.2	4.5	7.7
1989*	4.7	1.2	5.9	3.5	2.3	5.8
1990*	4-5	0-1	4-5	3-4	1-2	4-5

1/ Excludes operator households. The rates of return to assets and equity are calculated using the average of the current and previous years' assets and equity.

\*Forecast.

### The Bottom Line: The Number of Vulnerable Farmers Has Stabilized

	1986	1987	1988	1989
	1,000 farms			
Financially vulnerable farms				
Commercial farms	105	98	66	68
Small farms	110	105	76	73
	\$ billion			
Debt held on vulnerable farms				
Commercial farms	33	31	20	20
Small farms	8	10	6	6

Farm real estate debt should increase by about \$1 billion in 1990, spurred by greater lending to finance farmland sales. As lenders' inventories of foreclosed properties decline, they have fewer incentives to offer concessionary financing to move the properties.

Demand for non-real estate loans should rise slightly during 1990, because the increase in planted area will heighten the demand for most inputs, and because farmers continue to replace aging machinery. But since farmers' cash reserves appear adequate and feed costs are down, non-real estate debt may increase only about \$1 billion.

### With Income Stable & Equity Rising, Returns to Equity Will Drop

Farm equity is projected to be \$740 to \$750 billion at the end of 1990, up about 1 percent from a year earlier in inflation-adjusted terms. Farm equity likely rose

about 6 percent in 1989 to \$713 billion. This would be the fourth year equity has rebounded, following a 35-percent decline from 1980's peak. Farm equity growth has been due to appreciating asset values and less debt financing.

Adjustments in farm asset values, returns, and cash flow continue to support relatively high rates of return to farm assets and equity, but the rates now appear to be trending down. The total real rate of return on farm assets, including returns from current income and real capital gains, likely was 5.9 percent in 1989, and is expected to be 4 to 5 percent in 1990.

Overall, the financial position of farmers today is stronger than at any time since the mid-1970's. This is due largely to cautious investing, effective cost control, increased cash financing, government payments, and continued loan restructuring and debt write-offs. [Gregory Hanson and Duane Hacklander (202) 786-1807]

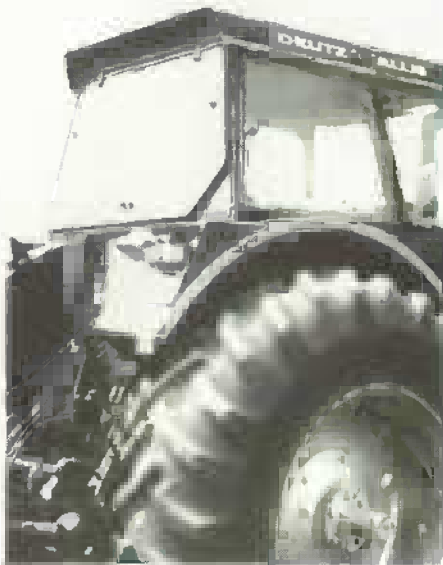
### 1987 Ag Census Results Improve USDA's Accuracy

For 1987 on, the income and other financial estimates here (and in tables 32-36 in the back of this issue) reflect new information from the 1987 Census of Agriculture, which was released recently. The new data show that farm production expenses likely were 3 percent higher for each year of the period than USDA's earlier estimates.

Smaller revisions in the expense series back to 1983 may be necessary, and will be covered in future issues of *Agricultural Outlook*.

The Census data did not call for revisions in the estimates of gross income, which is dominated by cash receipts. With higher costs and stable revenues, the revisions pushed down the estimates of net farm income by about 6-7 percent and of net cash income by 4-6 percent for 1987 and 1988.

In the fall, the production cost estimates may be revised again when the results of the Agricultural Economics and Land Ownership Survey become available. The survey was a follow-on to the Census.



## Resources

### Farmers To Buy More Inputs But Spend Less

Farmers are expected to spend between \$119 and \$122 billion in 1990 for agricultural inputs, compared with an estimated \$121 billion in 1989. They will buy more inputs such as seeds and fertilizer to support an increase in planted area, but declining feed costs will hold down aggregate input expenses.

Producers likely will buy slightly more pesticides, and pesticide prices will continue rising. Fertilizer prices are expected to remain flat, while seed prices will climb more slowly than in 1989. Expenditures for new equipment and farm improvements are expected to increase 4 to 5 percent, continuing a trend that began in 1987.

#### Seed Use To Rise

Nondurable agricultural input use depends largely on the number and mix of crop acres planted. Per acre seeding rates, application rates for fertilizer and pesticides, and tillage practices tend to change slowly from year to year, so the number of acres planted is the primary determinant of how much of these inputs is used.

Planted area of the principal crops increased to 316 million acres in 1989, and is expected to spread to 326-330 mil-

lion in 1990. This is driving the expansion in input use.

For 1990, seed use likely will rise about 4 percent over 1989. In 1989, seed consumption of the eight major field crops was close to 6.4 million tons, up from 1988 but down 11 percent from the 1981 record, when 7.2 million tons of seeds were planted. Seeding rates in 1989 for the major crops were similar to 1988, but seed costs per acre were higher because of higher prices.

USDA's prices paid index for seeds rose 10 percent in 1989, but is likely to increase only 3 to 5 percent in 1990 as the growth in corn and Conservation Reserve acreage slows and commodity prices weaken. Seed prices for non-hybrid crops tend to follow commercial crop prices.

#### Fertilizer, Pesticide Use Expanding

Fertilizer use in 1990 should be near 20.6 million tons, up 3 to 4 percent from last year. According to USDA estimates, fertilizer use in 1989 rose slightly to nearly 20 million tons.

In 1989, farmers used less fertilizer per acre for corn, soybeans, and wheat than in 1988. For corn, the major consumer of fertilizer nutrients, application rates for nitrogen fell 4 percent, while phosphate rates were down 6 percent and potash rates down 5.

Fertilizer carryover from the drought-stunted crop in 1988, as well as an increase in fertilizer prices in the spring of 1989, may have contributed to the declines.

With modest increases in demand projected for 1990, higher fertilizer stocks, and no significant gain in foreign demand, prices for 1990 likely will be similar to last year.

Because corn, wheat, and cotton acreage is anticipated to increase slightly in 1990, pesticide consumption probably will rise between 4 and 7 million pounds, 1 to 2 percent over estimated 1989 levels.

As new pesticide products that require very small amounts per acre are more widely adopted, aggregate pesticide poundage may actually decline, even through acres treated remain stable or even increase.

Pesticide prices went up slightly in 1988 and 1989 and are expected to rise again as acreage increases in 1990. A 2- to 4-percent rise would bring the prices paid index for agricultural chemicals up to the level reached in 1984.

#### Farmers Will Buy More Tractors

With farmers' net cash income to rise in 1990, agricultural interest rates to be about flat, and the sector's debt-asset ratio to stabilize, capital expenditures are expected to jump 4 to 5 percent. Prospects for increased planted acreage and an aging farm machinery stock also are likely to boost capital spending by farmers.

Tractors and other farm machinery typically make up about 60 percent of farmers' capital expenditures, with buildings and land improvements accounting for 25-30 percent. Cars and trucks account for the rest.

In 1986, a 7-year slump ended for the farm machinery industry. Unit sales of new farm tractors and other large pieces of equipment increased in 1987 and 1988 and likely rose again in 1989.

Sales of new, over-40-horsepower tractors may reach 64,000 units in 1990, up from an estimated 62,000 in 1989. Combine sales did not substantially rebound until 1989 because the 1988 drought led some farmers to postpone purchases. Self-propelled combine sales, which are closely linked to harvest prospects, began to rise significantly above 1988 in April 1989.

#### Energy Use To Be Flat

With only a modest increase in planted acreage forecast for 1990, energy use likely will remain near last year. Farmers' use of petroleum products has been declining steadily since 1978, regardless of planted acreage.

The switch from gasoline to diesel engines, reduced tillage operations, larger multifunction machines, and innovations in crop drying and irrigation have helped cut fuel needs. While no-till farming has not been widely adopted, reduced or conservation tillage systems are now more prevalent in many parts of the country than tillage systems that include moldboard plowing. [Stan G. Daberkow (202) 786-1459]

## Environmental Concerns Color the Long-Term Outlook

Two dimensions of longer term change in agriculture are critical to the outlook: the physical environment on which agriculture depends, and the world economy, which determines the use of physical resources in production.

Some caveats are in order. While long-term outlook work can help decisionmakers, it is also critical to keep in mind the uncertainty surrounding any long-term projections. They have a remarkable record of being wrong.

There are too many sources of changes that cannot be forecast, and they are not just a matter of transitory shocks such as droughts. The rate of change in underlying trend variables, such as population, can and have shifted unexpectedly. And these changes can cumulate for years, making distant forecasts look not only wrong but downright foolish.

### *Farmers Will Contend With More Environmental Regulations*

Events such as global warming are unlikely to affect agriculture directly in the 1990's. But anxiety over the physical environment and the effects of environmental changes will affect agriculture through regulation of inputs and methods of production.

During the coming decade, USDA, other parts of government, Congress, and private groups will be proposing new environmental and food safety regulations. Some of these proposals will be adopted as laws or regulations. Farmers will be pushed to change production practices as a result, and may face higher out-of-pocket costs.

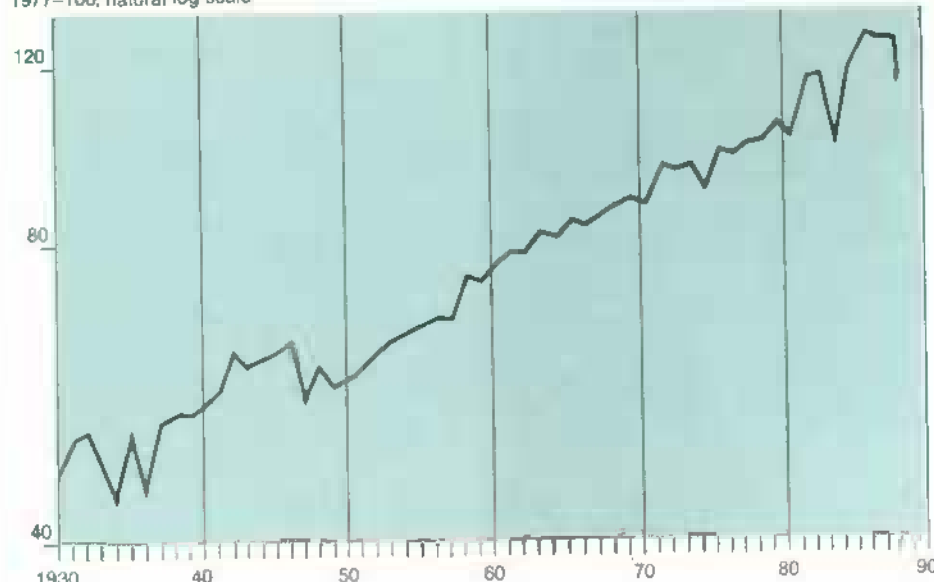
### *Past Trends May Shed Light on the 1990's*

Global agricultural production grew steadily, at 2.6 percent a year, from 1961 through 1985. Since world population grew at a slower rate, growth in agricultural output per capita also generally trended upward.

On a national and regional level, Eastern Europe and the USSR were experiencing respectable, but uneven, growth in total and per capita agricultural production in

U.S. Farm Productivity Has Trended Up 1-2 Percent a Year Since 1930

1977=100, natural log scale



the 1960's; that ended in the late 1970's. Now, they seem to have reentered a growth phase. China had a remarkable growth spurt in 1977-83.

Agricultural output in the developed countries grew steadily until the early 1980's, and then experienced a break in trend. Production in the developing countries generally has been growing faster than in the developed nations and in the centrally planned countries excluding China.

The data for the past few years reveal a plateau in world agricultural production. The slowdown has been widespread, including both developed and developing countries, as well as China. However, China maintains a healthy, even if slower, rate. Worldwide, only the centrally planned countries in Eastern Europe and the USSR have exceeded their earlier growth rates during the last 3 years.

In the U.S. and the EC, slower growth is attributable to programs to counter swelling surpluses. But the U.S. droughts in 1988 and 1989 took the slowdown much further than was intended. Explanations of the slowdown elsewhere come less easily; it remains to be seen whether there has been a break with past trends.

### *Productivity Growth Not Slowing*

The challenge is whether the world as a whole will maintain the long-term trends

in growth of agricultural output per capita. The expansion of cropland is slowing, significantly cutting global per capita cropland availability.

The trade-offs between the environment, food safety, and growing worldwide reliance on technology to maintain production growth constitute one set of developments to watch in the coming decade.

Because of land and other economic constraints on expanded input use, productivity gains play a key role in the growth of world food availability. U.S. farm productivity has trended up by 1-2 percent a year for the last 60 years.

While U.S. productivity growth fluctuates around its trend, there is no evidence that the rate of growth has declined in recent years. The measure of productivity used here, called total factor productivity, is defined as an index of output divided by an index of all inputs, including labor, land, equipment, fertilizers, and so on.

Although estimates of total factor productivity are scarce for other countries, studies have been carried out for Canada, India, Indonesia, Japan, South Korea, Pakistan, Taiwan, Thailand, and the U.K. They show similar rates of productivity growth, 1 to 2 percent annually, and also show no signs of a slowdown in recent years.



## Policy and Growth To Govern Demand

While global production had been increasing at over 2 percent a year until the mid-1980's, population growth has been slowing, from 2 percent a year during the 1960's to about 1.6 percent currently. Because population had grown less than output, output per person had been increasing until the past few years.

In spite of occasional problems with surpluses in the developed countries, adequate food production remains a challenge, even though the trend to slower population growth is expected to continue.

The globe's population is now expanding by nearly 90 million people each year. This is equal to adding more than one-third of the U.S. population. However, for demand to increase, incomes must climb as well.

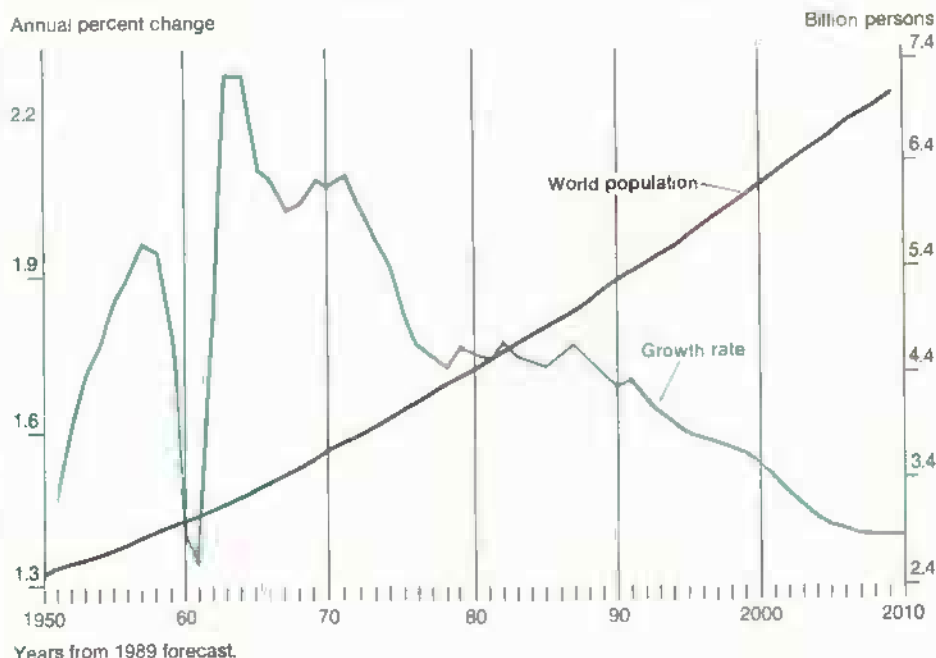
Domestic demand for U.S. agricultural products in the 1990's can be expected to expand at about the population growth rate. With slow growth in domestic demand, prospects for expanding U.S. agriculture depend on export demand. So, the international economic growth behind export demand constitutes a second set of developments to watch in the 1990's.

The developing countries have been the growth markets for U.S. grain exports. Export markets have been shrinking in the developed countries, while the centrally planned countries have been large and volatile importers.

In the 1970's, the developing countries not only expanded their own agricultural production, but increased their imports as well. This shift in demand was fed by rapid economic growth and easy credit. In the 1980's, when economic growth in these countries slowed and debt repayment problems began to accumulate, their agricultural imports fell.

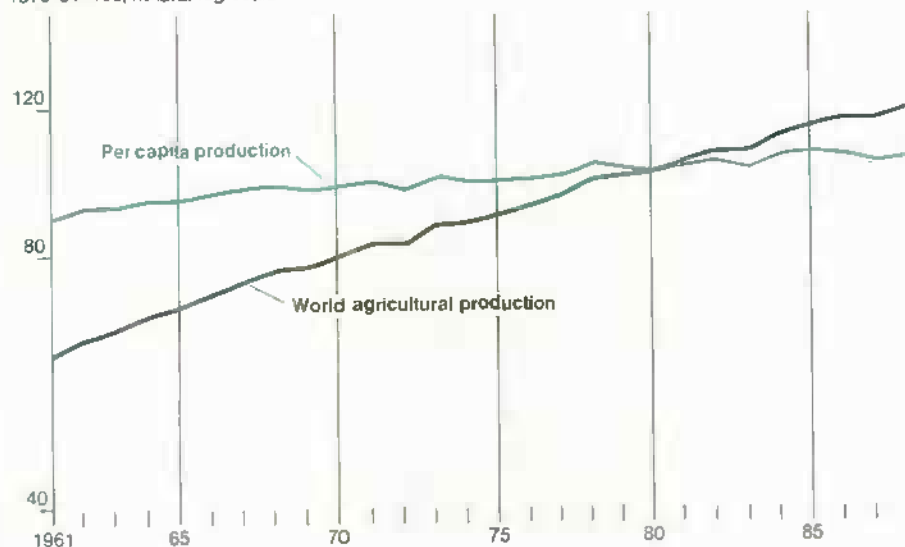
Clearly, fostering the economic progress of the developing countries and resolving their debt problems are critical to boosting export demand in the 1990's. If the debt problem is resolved, USDA research suggests that developing countries' economic growth and demand for agricultural products would rise substantially.

## Falling Growth Rate In World Population Will Affect Long-Term Agricultural Demand



## World Ag Output Per Capita Plateaus, As Growth in Total Production Slows

1979-81=100, natural log scale.



In the centrally planned countries, which—including China—account for nearly 30 percent of the world's population, food policy decisions will be as important as economic expansion. China's growth in both total and per capita production has been impressive. But its per capita production is still below the world average, and is about a third of per capita production in the centrally planned countries of Eastern Europe and the USSR.

Whether centrally planned countries will choose (or be forced) to continue supplementing their production with imports will be a policy decision critical for exporting countries, including the U.S., to contend with.

Developed countries are both customers and export competitors for the U.S. Here, policy issues again dominate. For example, the EC's Common Agricultural Policy has transformed the Community

from a major wheat importer into a large exporter in the 1980's.

While economic growth is needed to translate the potential demand in developing countries into effective demand, policy reform is needed in many developed countries, including the U.S. The single most helpful development in assuring U.S. farmers of expanding export markets in the 1990's would be a successful conclusion to the agricultural trade negotiations in the current GATT round.

An additional factor is the exchange value of the dollar. USDA expects a gradual decline, which would improve the U.S. export picture slightly.

#### ***Bottom Line: Tighter Markets, But Prices May Be Flat***

On the demand side, the global population is expected to grow more slowly, but rising per capita income and resolving the international debt problem likely will make per capita demand grow more rapidly in the 1990's than in the 1980's. While there is no official USDA forecast on how these forces will balance out, the most likely prospect is for world demand to grow slightly faster in the 1990's.

On the supply side, environmental concerns and expanding nonagricultural land uses suggest a slower rate of growth in resources for agriculture. But productivity growth is not expected to slow, and may even accelerate slightly in the 1990's.

The global scenario suggests that demand will grow slightly faster and supply not much if any faster in the 1990's relative to the 1980's. This suggests tighter markets in the 1990's, but the picture for commodity prices is unclear. Real prices fell sharply in the 1980's. The scenario sketched here means that prices in real terms will not fall as sharply in the 1990's, but not necessarily that they will rise.

The long-term data show a clear downward trend in real prices. The aggregate of all prices received by U.S. farmers follows this trend. For example, the real price of wheat shows a drop of about 1.9 percent per year for 1910-88. Currently, wheat prices and the prices received index generally are below their long-term trend lines.

While USDA forecasts for 1990 do not foresee a return to trend prices, sometime in the 1990's it would not be surprising to see a price spurt, fueled by unforeseeable events, that would bring them back to the long-term trend. The likely trigger would be accelerated real income growth on a global scale, accompanied by a temporary supply shock.

The U.S. competitive position and hence farm income will depend on keeping productivity on an upward track and costs moving down compared with other countries. The U.S. also would get a strong boost from a level playing field in international markets, which is why the GATT negotiations are crucial for the 1990's.

In any forecast of the outcome of these events, it is hard to separate elements of wishes as opposed to evidence, especially when the evidence is so fragmentary. The potential is there for a prosperous U.S. agriculture in the 1990's. Whether it occurs or not depends largely on the agricultural community in its broadest sense. *[Bruce Gardner (202) 447-4164]*

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**NOTE:** Each issue of *Agricultural Outlook* contains highlights of the situation and outlook for the following commodities—

- **Livestock:** cattle, hogs, broilers, eggs, turkeys, dairy
- **Crops:** wheat, rice, feed grains, oilseeds, cotton, tobacco, sugar, vegetables, fruit

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- "New Soviet Farm Policy Could Trim Grain Imports," 7/26
- "The New Tax Law and Its Effect on Farmers," 11/26
- "The Outlook for Farmland Values Is Still Clouded," 6/25
- "Prosperity in Parts: Changes in the Broiler Industry," 7/24
- "The Roller Coaster Ride of the Input Industries, 1975-1985," 12/22
- "U.S. vs. the World: Trade Negotiations Ahead," 8/34
- "What Will It Cost Farmers To Comply With Conservation Provisions?" 10/27

#### 1987:

- *Standard articles*

- Agricultural Economy: monthly
- Agricultural Policy: 8/25
- Farm Finance: 1-2/24, 3/15, 5/16, 6/19, 8/23, 9/22, 25, 10/23, 11/18, 12/18
- Food and Marketing: 5/22, 8/20, 10/33
- General Economy: 3/16, 7/20, 10/26
- Inputs (*see Resources*)
- Resources: 3/21, 6/24, 7/24, 8/19, 9/18, 20, 10/19, 11/19, 12/23
- Transportation: 4/14, 6/22, 7/23, 10/17 (storage)
- World Agriculture and Trade: 3/12, 4/11, 5/18, 7/16, 10/15, 12/20

- *Commodity spotlights*

- Almonds: 8/16
- Butter and margarine: 3/12
- Cattle/beef: 4/9, 7/11, 9/13, 10/11
- Cigarette consumption: 3/10
- Crop yields: 10/12
- Cropland: 7/13
- Dairy farms: 6/11
- Electronic trading: 5/14
- Fresh produce: 6/15
- Generic certificates: 12/14
- Grain prices: 6/12
- Hogs/pork: 5/10, 5/11, 8/12, 12/12
- Irradiation: 7/15
- Marketing orders: 9/16
- Meat: 3/11
- Oats: 12/12
- Oilseeds/vegetable oil: 7/12, 12/17
- Peanuts: 4/10
- Rice: 11/14
- Soybeans: 5/12
- Sugar/HFCS: 6/17, 10/13
- Turkeys: 11/13
- Vegetables: 11/15, 12/15
- Wheat: 8/13, 9/14
- Wool: 6/18

- *Special reports*

- "Agriculture and the 100th Congress," 3/24
- "Agricultural Debt at Risk: How Much Do Farm Lenders Stand to Lose?" 3/27
- "Controlling Farm Pollution of Coastal Waters," 11/24
- "Debt Still Overhangs Third World Economies," 7/26
- "Disparities in Parity," 8/40
- "Export Growth Markets for U.S. Grains and Oilseeds," 8/37
- "The Farm Economy May Have Turned the Corner," 6/27
- "Fundamental Changes Ahead for the Farm Credit System," 12/25
- "Generic Certificates Help Meet Goals of the 1985 Farm Act," 4/16
- "How Demographics Will Change Food Consumption by 2005," 4/34
- "Immigration Reform and U.S. Farm Labor," 5/26
- "The Long-Range Outlook for China's Agricultural Production & Trade," 12/29
- "Marketing Loans vs. Other Program Options for Wheat, Feed Grains, & Soybeans," 9/31
- "The Outlook for Cereal Production in the Third World," 6/34
- "The Outlook for Farm Program Spending," 4/24
- "Policies for Boosting Third World Grain Imports," 9/28
- "'Quick PIK' Tax Ruling Revoked; Other Tax Problems Vex Farmers," 11/27
- "Soil Erosion: Dramatic in Places, But Not a Serious Productivity Threat," 4/28
- "Some International Experiences with Mandatory Supply Controls," 5/29

#### 1988:

- *Standard articles*

- Agricultural Economy: monthly
- Agricultural Policy: 4/23, 9/27, 12/31
- Farm Finance: 1-2/24, 3/22, 4/18, 5/23, 7/19, 8/16, 9/18, 12/16
- Food and Marketing: 1-2/30, 3/26, 6/24, 8/36, 9/24, 10/30, 11/24, 12/26
- General Economy: 3/18, 6/18, 9/20, 12/19
- Resources: monthly except Jan./Feb.
- Transportation: 8/34, 11/21
- World Agriculture and Trade: 1-2/27, 5/18, 7/22, 8/22, 10/16, 11/16, 12/13

- *Commodity spotlights*

- Aquaculture: 6/16, 12/12
- Barley: 4/14
- Broilers: 5/15
- Cigarettes: 11/13
- Citrus: 4/16, 9/16
- Com: 6/13, 10/14
- Cotton: 8/13
- Dairy: 10/13, 12/11
- Dry beans: 10/15
- Grain, foreign: 7/15
- Grazing: 5/14
- Hogs: 3/12
- Horticulture: 7/12, 8/15
- Meat: 9/13, 11/15
- Produce trade: 3/14
- Protein feed: 3/16
- Rapeseed: 9/14
- Sugar: 5/16
- Turkey: 11/12

- *Special reports*

- "Alternative Agriculture Gains Attention," 4/26
- "Drought Deals Blow to Economies of Farm Export Counties," 9/30
- "EC Budget Reforms Grapple with High Agricultural Costs," 12/38
- "Ethanol Could Affect Corn Prices, Farm Income, and Government Outlays," 7/28
- "GATT Negotiations: Paving the Way for Liberalized Trade In Agriculture," 12/33
- "Post-Drought Prospects for Crops: Higher Production, Low Inventories," 11/26
- "Rural Communities Touched by Drought on Farms," 8/37
- "Soviet Grain Forecast for 1988: 215 Million Tons," 6/28
- "Soviets Harvest Another Good Grain Crop, Yet Imports Continue High," 5/29
- "A Survey of Resource & Environmental Policies Affecting Agriculture," 3/28
- "World Commodity Markets: Conflict and Resolution," 4/29

# 1989:

- *Standard articles*

- Agricultural Economy: monthly
- Agricultural Policy: 5/30, 7/21, 10/26
- Farm Finance: monthly except Nov. & Dec.
- Food and Marketing: 1-2/35, 3/30, 6/30, 7/19, 9/28, 12/21
- General Economy: 3/26, 6/24, 9/22, 11/20, 12/17
- Resources: 1-2/34, 3/28, 5/24, 6/26, 8/25, 10/24, 11/23, 12/18
- Rural Development: 5/32, 9/25
- World Agriculture and Trade: monthly except July

- *Commodity spotlights*

- Apples: 4/18, 6/16
- Canola: 12/11
- Catfish: 4/17

- Dairy: 9/11
- Greenhouse/nursery: 8/14
- Herbs: 10/11
- Hormones: 6/10
- Livestock/meat: 3/14, 5/14, 6/10
- Oats: 9/13
- Rice: 6/15
- Sheep: 7/10
- Tobacco: 11/12
- Triticale: 10/12
- Tropical oils: 4/15
- Turkey: 11/11
- Watermelon: 7/12
- Wheat: 4/14, 17, 6/14, 8/12
- World grains: 3/15

- *Special reports*

- "Banning Soil Fumigants: What Cost?" 6/32
- "Europe 1992, GATT, & Food Safety: How Will U.S. Agriculture Fare?" 12/33
- "Feed Industries Can Spur World Trade," 8/26
- "Food Distribution, Not Production, the Problem Through 2000," 5/34
- "Generic Certificates Cut Stocks and Boost Income," 6/34
- "Hope for the Sahel?" 7/24
- "Hybrid Versus Semidwarf Wheats," 3/32
- "Liberalizing World Trade in Coarse Grains," 10/29
- "Liberalizing World Trade in Oilseeds," 12/28
- "Liberalizing World Trade in Rice," 9/30
- "Liberalizing World Trade in Tobacco," 11/27
- "Liberalizing World Trade in Wheat," 7/28
- "Soviet Agriculture in the 1990's and the U.S.-USSR Grain Agreement," 12/24
- "U.S.-EC Hormone Dispute," 3/35
- "Water Restrictions for California Vegetables," 4/30
- "Weighing Crop Insurance Alternatives," 10/33

# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1989					1990			
	I	II	III	IV	Annual F	I F	II F	III F	Annual F
Prices received by farmers (1977=100)	149	148	144	144	147	144	140	--	137
Livestock & products	159	156	159	160	158	161	154	--	150
Crops	138	140	129	127	135	126	126	--	122
Prices paid by farmers, (1977=100)									
Production items	163	165	165	164	164	--	--	--	163
Commodities & services, interest, taxes, & wages	175	177	178	178	177	--	--	--	180
Cash receipts (\$ bil.) 1/	156	161	170	145	158	164	166	--	160-163
Livestock (\$ bil.)	84	81	81	84	83	89	79	--	80-83
Crops (\$ bil.)	71	80	88	61	75	74	86	--	77-80
Market basket (1982-84=100)									
Retail cost	122	124	125	126	124	--	--	--	--
farm value	107	108	107	107	107	--	--	--	--
Spread	131	133	135	134	133	--	--	--	--
Farm value/retail cost (%)	30	30	30	30	30	--	--	--	--
Retail prices (1982-84=100)									
Food	123	125	126	126	125	--	--	--	--
At home	122	124	125	125	123	--	--	--	--
Away from home	125	127	128	130	128	--	--	--	--
Agricultural exports (\$ bil.) 2/	10.9	9.8	8.8	10.0	39.7	10.5	8.8	8.8	38.0
Agricultural imports (\$ bil.) 2/	5.8	5.5	5.0	5.1	21.5	5.7	5.4	4.8	21.0
Commercial production									
Red meat (mil. lb.)	9,594	9,870	9,847	10,049	39,360	9,675	9,817	10,400	36,750
Poultry (mil. lb.)	5,070	5,539	5,702	5,600	21,910	5,540	5,940	6,020	23,405
Eggs (mil. doz.)	1,391	1,394	1,388	1,415	5,588	1,400	1,410	1,420	5,700
Milk (bil. lb.)	36.6	38.0	35.5	35.0	145.2	36.6	38.7	36.5	147.8
Consumption, per capita									
Red meat and poultry (lb.)	52.5	54.1	54.9	56.7	218.2	53.4	55.3	56.1	223.0
Corn beginning stocks (mil. bu.) 3/	7,071.6	5,203.9	3,419.0	1,930.0	4,259.1	--	--	--	--
Corn use (mil. bu.) 3/	1,868.5	1,787.0	1,489.9	--	--	--	--	--	--
Prices 4/									
Choice steers--Omaha (\$/cwt)	73.67	73.85	70.09	72-73	72-73	72-78	72-78	69-75	71-77
Barrows & gilts--7 mths. (\$/cwt)	40.78	41.84	46.07	46-47	43-44	41-47	42-48	44-50	42-48
Broilers--12-city (cts./lb.)	59.4	67.1	59.7	50-51	59-60	48-54	50-56	52-58	49-55
Eggs--NY gr. A large (cts./doz.)	78.6	75.2	81.5	90-91	81-82	77-83	69-75	62-68	67-73
Milk--all at plant (\$/cwt)	13.07	12.27	13.27	15.00	13.40	13.60	11.05	10.90	11.80
				15.50	13.55	14.60	12.05	11.90	12.80
Wheat--KC HRW ordinary (\$/bu.)	4.34	4.44	4.31	--	--	--	--	--	--
Corn--Chicago (\$/bu.)	2.72	2.76	2.49	--	--	--	--	--	--
Soybeans--Chicago (\$/bu.)	7.63	7.39	6.71	--	--	--	--	--	--
Cotton--Avg. spot mkt. (cts./lb.)	55.3	60.9	67.1	--	--	--	--	--	--
	1982	1983	1984	1985	1986	1987	1988	1989	1990 F
Gross cash income (\$ bil.)	150.6	150.4	155.3	156.9	152.5	162.0	171.6	174	173-178
Gross cash expenses (\$ bil.)	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	119-122
Net cash income (\$ bil.)	37.8	36.9	38.7	46.7	51.8	54.5	57.2	53	52-57
Net farm income (\$ bil.)	23.5	12.7	32.2	32.4	38.0	43.6	42.7	48	44-49
Farm real estate values 5/									
Nominal (\$ per acre)	823	788	782	679	595	547	564	597	--
Real (1977 \$)	513	472	448	376	322	290	288	291	--

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct-Sept fiscal years ending with year indicated. 3/ Dec-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1981 & 1986-89 values as of February 1. 1982-85 values as of April 1. F = forecast, -- = not available.



# U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

	Annual			1988		1989		
	1986	1987	1988	III	IV	I	II	III P
\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product <sup>1</sup>	4,231.6	4,524.3	4,880.6	4,926.9	5,017.3	5,113.1	5,201.7	5,278.9
Personal consumption expenditures	2,797.4	3,010.8	3,235.1	3,263.4	3,324.0	3,381.4	3,444.1	3,513.2
Durable goods	406.0	421.0	455.2	452.5	467.4	466.4	471.0	488.5
Nondurable goods	942.0	998.1	1,052.3	1,066.2	1,078.4	1,098.3	1,121.5	1,133.7
Clothing & shoes	166.8	177.2	186.8	188.9	193.9	195.0	198.9	202.6
Food & beverages	500.0	529.2	559.7	567.8	574.1	587.3	592.2	599.8
Services	1,449.5	1,591.7	1,727.6	1,744.7	1,778.2	1,816.7	1,851.7	1,891.0
Gross private domestic investment	659.4	699.9	750.3	771.1	752.8	769.6	775.0	779.0
Fixed investment	652.5	670.6	719.6	726.5	734.1	742.0	747.6	752.1
Change in business inventories	6.9	29.3	30.6	44.6	18.7	27.7	27.4	26.9
Net exports of goods & services	-97.4	-112.6	-73.7	-66.2	-70.8	-54.0	-50.6	53.5
Government purchases of goods & services	872.2	926.1	968.9	958.6	1,011.4	1,016.0	1,033.2	1,040.2
1982 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	3,717.9	3,853.7	4,024.4	4,042.7	4,069.4	4,106.8	4,132.5	4,160.2
Personal consumption expenditures	2,446.4	2,513.7	2,598.4	2,608.1	2,627.7	2,641.0	2,653.7	2,694.1
Durable goods	384.4	389.6	413.6	410.7	420.5	419.3	424.9	438.3
Nondurable goods	878.1	890.4	904.5	910.3	912.0	915.0	909.7	922.5
Clothing & shoes	157.4	159.6	161.3	164.1	164.6	165.0	165.8	173.6
Food & beverages	447.1	452.7	460.0	461.9	462.1	466.0	461.4	464.5
Services	1,183.8	1,233.7	1,280.2	1,287.0	1,295.2	1,306.7	1,319.0	1,333.3
Gross private domestic investment	639.6	674.0	715.8	733.6	709.1	721.1	719.8	723.7
Fixed investment	634.1	650.3	687.9	696.1	690.8	696.6	700.7	702.5
Change in business inventories	5.6	23.7	27.9	37.5	18.3	24.5	19.1	21.2
Net exports of goods & services	-129.7	-115.7	-74.9	-74.9	-73.8	-55.0	-51.2	-63.6
Government purchases of goods & services	761.6	781.8	785.1	775.9	806.4	799.7	810.3	806.0
GNP implicit price deflator (% change)	2.6	3.2	3.3	4.4	4.7	4.0	4.6	3.2
Disposable personal income (\$ bil.)	3,013.3	3,205.9	3,477.8	3,511.7	3,587.4	3,689.5	3,747.7	3,808.4
Disposable per. income (1982 \$ bil.)	2,635.3	2,676.6	2,793.2	2,806.4	2,835.9	2,881.7	2,887.6	2,920.6
Per capita disposable per. income (\$)	12,469	13,140	14,116	14,235	14,504	14,884	15,084	15,286
Per capita dis. per. income (1982 \$)	10,905	10,970	11,337	11,377	11,466	11,625	11,622	11,723
U.S. population, total, incl. military abroad (mil.)	241.6	243.9	246.4	246.7	247.3	247.9	248.5	249.1
Civilian population (mil.)	239.4	241.7	244.1	244.5	245.1	245.7	246.2	246.8
	Annual			1988		1989		
	1986	1987	1988	Oct R	July	Aug	Sept P	Oct A
Industrial production (1977=100)	125.1	129.8	137.2	139.4	142.0	142.4	142.4	141.4
Leading economic indicators (1982=100)	132.1	139.6	142.5	143.9	144.0	144.8	145.2	144.6
Civilian employment (mil. persons)	109.6	112.4	115.0	115.6	117.5	117.6	117.5	117.5
Civilian unemployment rate (%)	7.0	6.2	5.5	5.3	5.2	5.1	5.2	5.2
Personal income (\$ bil. annual rate)	3,526.2	3,777.6	4,064.5	4,180.4	4,444.3	4,458.5	4,469.7	4,510.3
Money stock-M2 (daily avg.) (\$ bil.) 1/	2,811.2	2,909.9	3,069.5	3,042.3	3,117.4	3,136.5	3,156.0	3,176.6
Three-month Treasury bill rate (%)	5.98	5.82	6.69	7.34	7.92	7.91	7.72	7.59
AAA corporate bond yield (Moody's) (%)	9.02	9.38	9.71	8.92	8.93	8.96	9.01	8.92
Housing starts (1,000) 2/	1,805	1,621	1,488	1,532	1,420	1,329	1,268	1,420
Auto sales at retail, total (mil.)	11.4	10.3	10.6	9.9	10.2	11.4	10.7	8.8
Business inventory/sales ratio	1.55	1.51	1.50	1.50	1.54	1.50	1.51	--
Sales of all retail stores (\$ bil.)	121.2	125.5	134.4	138.2	144.9	145.9	145.2	144.5
Nondurable goods stores (\$ bil.)	73.9	76.9	83.6	84.9	88.9	89.0	90.0	90.1
Food stores (\$ bil.)	24.6	25.3	27.6	28.1	29.8	29.9	30.2	30.5
Eating & drinking places (\$ bil.)	12.1	12.7	13.1	13.5	13.7	13.8	14.0	14.0
Apparel & accessory stores (\$ bil.)	6.7	7.1	7.0	7.0	7.4	7.4	7.5	7.5

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. A = advance. -- = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 3.—Foreign Economic Growth, Inflation, &amp; Export Earnings

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P	1990 F	1991 F	Average 1980-89
	Annual percent change											
World, less U.S.												
Real GDP	1.4	1.6	1.6	3.2	2.5	2.4	3.0	3.9	3.4	3.2	2.8	2.2
Consumer prices	15.8	14.7	18.8	22.8	22.1	11.8	16.6	34.4	70.9	58.8	12.3	17.8
Export earnings	-2.7	-6.7	-2.7	5.7	1.9	10.9	18.4	13.3	9.9	9.5	9.7	2.8
Developed less U.S.												
Real GDP	1.4	1.1	1.9	3.4	3.3	2.4	3.1	3.9	3.6	2.7	2.8	2.0
Consumer prices	9.6	8.0	6.0	5.1	4.7	2.8	2.6	2.9	4.2	3.6	3.3	7.9
Export earnings	-3.2	-4.4	-0.5	7.4	4.6	19.5	17.7	12.5	7.6	10.3	9.0	3.3
Asia, incl. China												
Real GDP	6.1	5.5	7.7	7.3	7.0	6.1	7.0	9.6	5.9	5.4	6.6	6.5
Consumer prices	9.3	5.8	6.2	6.7	7.3	5.7	7.3	11.8	7.9	7.9	7.7	8.1
Export earnings	7.6	-0.5	4.6	14.6	-0.9	9.4	29.4	23.1	13.4	10.5	14.6	10.7
Latin America												
Real GDP	-0.4	-1.5	-2.6	3.3	3.4	3.6	3.1	0.5	-1.8	1.8	2.8	0.9
Consumer prices	60.1	73.6	118.9	116.5	127.4	83.0	117.2	213.7	700.8	578.8	85.0	84.8
Export earnings	6.5	-10.6	-1.0	6.6	-7.6	-14.5	9.1	17.0	10.2	4.8	8.1	6.3
Africa & Middle East												
Real GDP	0.0	1.4	0.1	1.1	0.0	-1.2	1.4	3.5	3.5	3.2	3.3	0.8
Consumer prices	17.3	12.9	16.7	19.4	11.2	11.7	13.3	23.7	20.7	17.4	16.2	18.2
Export earnings	-9.9	-18.0	-17.8	-6.1	-4.2	-21.1	16.1	2.8	9.1	8.5	7.9	-5.1
Eastern Bloc												
Real GDP	---	---	2.7	1.9	1.3	3.2	1.4	2.9	1.4	1.1	2.2	---
Export earnings	---	---	8.2	1.5	-5.1	7.3	6.7	2.5	4.1	6.8	8.8	---

P = preliminary. F = forecast. -- = not available.

Information contact: Alberto Jernado, (202) 786-1705.

## Farm Prices

Table 4.—Indexes of Prices Received &amp; Paid by Farmers, U.S. Average

	Annual			1988		1989				
	1986	1987	1988	Nov	June	July	Aug	Sept R	Oct	Nov P
	1977=100									
Prices received										
All farm products	123	126	138	144	147	146	144	143	145	147
All crops	107	106	126	136	138	134	126	126	128	129
Food grains	109	103	137	155	154	153	152	151	152	153
Feed grains & hay	98	85	120	133	131	126	120	120	118	118
Feed grains	96	81	117	130	125	122	115	114	112	113
Cotton	91	99	95	93	97	100	101	106	109	110
Tobacco	138	129	132	144	144	143	142	148	146	144
Oil-bearing crops	77	79	108	112	107	104	95	89	87	88
Fruit, all	169	181	181	194	197	159	163	201	211	211
Fresh market 1/	177	194	194	208	212	163	167	213	224	223
Commercial vegetables	130	144	142	147	152	168	137	125	142	149
Fresh market	123	147	137	144	149	170	131	116	137	146
Potatoes & dry beans	114	126	124	154	211	233	189	146	141	160
Livestock & products	138	146	150	151	157	157	161	160	162	163
Meat animals	145	163	168	163	172	174	177	172	174	174
Dairy products	129	129	126	138	127	130	163	144	151	157
Poultry & eggs	128	107	118	129	144	138	139	139	129	134
Prices paid										
Commodities & services,										
interest, taxes, & wage rates	159	161	170	--	--	178	--	--	178	--
Production items	144	147	157	--	--	165	--	--	164	--
Feed	108	103	128	--	--	133	--	--	128	--
Feeder livestock	153	179	192	--	--	193	--	--	196	--
Seed	148	148	150	--	--	170	--	--	170	--
Fertilizer	124	118	130	--	--	141	--	--	131	--
Agricultural chemicals	127	124	126	--	--	133	--	--	133	--
Fuels & energy	162	161	163	--	--	188	--	--	184	--
Farm & motor supplies	144	145	148	--	--	155	--	--	155	--
Autos & trucks	198	208	215	--	--	225	--	--	225	--
Tractors & self-propelled machinery	174	174	181	--	--	192	--	--	199	--
Other machinery	182	185	197	--	--	209	--	--	210	--
Building & fencing	136	137	138	--	--	141	--	--	143	--
Farm services & cash rent	145	146	147	--	--	151	--	--	151	--
Interest payable per acre on farm real estate debt	211	190	186	--	--	190	--	--	190	--
Taxes payable per acre on farm real estate	138	139	142	--	--	144	--	--	144	--
Wage rates (seasonally adjusted)	160	167	172	--	--	191	--	--	191	--
Production items, interest, taxes, & wage rates	150	151	160	--	--	167	--	--	167	--
Ratio, prices received to prices paid (%) 2/	77	79	82	83	83	82	81	80	81	83
Prices received (1910-14=100)	561	578	631	657	673	667	657	655	663	671
Prices paid, etc. (parity index) (1910-14=100)	1,093	1,110	1,167	--	--	1,226	--	--	1,227	--
Parity ratio (1910-14=100) (%)2/	51	52	54	--	--	58	--	--	57	--

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly and will be published in January, April, July, and October. P = preliminary. R = revised.

-- = not available.

**Table 5.—Prices Received by Farmers, U.S. Average**

	Annual 1/			1988			1989			
	1986	1987	1988	Nov	June	July	Aug	Sept R	Oct P	Nov P
<b>Crops</b>										
All wheat (\$/bu.)	2.42	2.57	3.72	3.88	3.84	3.78	3.74	3.72	3.79	3.76
Rice, rough (\$/cwt)	3.75	7.27	6.75	6.72	6.94	7.33	7.33	7.55	7.54	7.38
Corn (\$/bu.)	1.50	1.94	2.54	2.51	2.52	2.47	2.26	2.27	2.20	2.25
Sorghum (\$/cwt)	1.37	1.70	2.27	3.99	3.90	3.99	3.81	3.80	3.61	3.74
All hay, baled (\$/ton)	59.70	65.10	87.10	87.60	94.80	85.40	82.80	85.00	85.70	83.60
Soybeans (\$/bu.)	4.78	5.88	7.35	7.43	7.06	6.83	6.07	5.70	5.28	5.62
Cotton, upland (cts./lb.)	51.4	64.3	55.5	57.5	58.8	60.6	61.1	63.8	64.1	66.3
Potatoes (\$/cwt)	5.03	4.35	5.49	5.67	8.45	9.47	7.57	5.62	4.97	6.14
Lettuce (\$/cwt)	11.90	14.70	14.70	14.20	13.50	16.30	10.50	12.60	17.70	14.30
Tomatoes (\$/cwt)	25.10	26.00	26.80	28.50	27.90	28.40	23.90	21.40	28.50	29.70
Onions (\$/cwt)	10.90	12.50	9.70	12.20	13.60	16.70	15.80	9.55	11.40	11.40
Dry edible beans (\$/cwt)	19.10	16.50	29.70	29.70	31.10	31.90	27.60	25.00	25.40	27.60
Apples for fresh use (cts./lb.)	19.1	12.7	17.2	17.6	10.8	9.8	16.1	19.1	15.9	13.4
Pears for fresh use (\$/ton)	369.00	227.00	357.00	348.00	493.00	480.00	398.00	382.00	387.00	369.0
Oranges, all uses (\$/box) 2/	4.27	5.40	6.56	6.01	8.10	5.04	3.91	5.62	6.22	6.47
Grapefruit, all uses (\$/box) 2/	4.29	4.96	5.39	5.45	4.85	4.62	5.63	6.10	8.18	5.54
<b>Livestock</b>										
Beef cattle (\$/cwt)	52.80	61.40	66.80	66.70	67.60	68.00	69.70	68.20	67.40	69.40
Calves (\$/cwt)	60.90	78.10	89.80	87.80	94.20	94.70	94.20	91.10	90.20	87.30
Hogs (\$/cwt)	50.10	50.80	42.50	36.20	45.10	45.90	45.70	43.40	46.80	44.3
Lambs (\$/cwt)	69.10	77.90	69.50	66.30	70.60	68.60	66.60	65.90	63.10	56.40
All milk, sold to plants (\$/cwt)	12.50	12.53	12.22	13.40	12.30	12.60	13.20	14.00	14.50	15.20
Milk, manuf. grade (\$/cwt)	11.46	11.37	11.15	12.50	11.30	11.60	12.20	13.10	13.60	14.40
Broilers (cts./lb.)	34.5	28.8	34.0	34.8	42.6	39.1	36.1	37.1	30.6	29.8
Eggs (cts./doz.) 3/	61.2	53.1	53.2	59.5	63.3	64.0	71.0	71.0	71.3	78.6
Turkeys (cts./lb.)	44.4	34.3	36.5	47.9	44.0	41.5	41.3	37.3	38.5	40.9
Wool (cts./lb.) 4/	64.3	87.1	138.0	119.0	139.0	120.0	105.00	97.7	100.0	100.0

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 4/ Average local market price, excluding incentive payments. P = preliminary. R = revised.

Information contact: Ann Duncan (202) 786-3313.

## Producer & Consumer Prices

**Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)**

	Annual	1988			1989						
	1988	Oct	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
		1982-84=100									
Consumer Price Index, all items	118.3	120.2	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6
Consumer Price Index, less food	118.3	120.2	121.3	122.0	122.9	123.5	123.9	124.2	124.3	124.8	125.4
<b>All food</b>	118.2	120.3	122.9	123.5	124.2	124.9	125.0	125.5	125.8	126.1	126.5
Food away from home	121.8	123.4	125.2	125.7	126.2	126.7	127.1	127.8	128.1	128.8	129.1
Food at home	116.6	119.0	122.0	122.7	123.5	124.4	124.3	124.8	124.9	125.0	125.4
Meats 1/	112.2	113.0	114.3	115.5	115.6	115.6	116.1	116.7	117.5	117.7	118.1
Beef & veal	112.1	113.7	116.6	119.0	119.0	119.6	119.3	119.5	119.7	120.0	120.0
Pork	112.5	111.8	110.9	111.0	111.2	110.1	111.8	113.6	114.8	114.3	114.9
Poultry	120.7	129.4	128.4	130.3	133.0	137.3	140.1	138.1	136.2	134.0	131.2
Fish	137.4	137.4	142.9	144.3	143.3	142.3	142.9	142.3	145.2	146.9	143.9
Eggs	93.6	105.5	106.1	122.9	117.6	112.6	110.6	112.8	115.2	124.6	122.9
Dairy products 2/	108.4	109.9	113.4	113.8	114.1	113.8	113.6	114.1	114.5	116.1	118.2
Fats & oils 3/	113.1	117.1	120.5	120.4	121.6	121.6	121.6	121.6	121.7	121.3	121.6
Fresh fruit	143.0	149.7	150.0	149.5	152.4	158.1	151.7	150.6	151.4	155.1	156.6
Processed fruit	122.0	124.3	125.5	124.7	124.6	125.1	125.6	126.0	126.9	127.8	127.1
Fresh vegetables	129.3	129.4	144.4	140.2	144.1	153.2	150.8	150.8	145.1	133.9	134.8
Potatoes	119.1	125.2	138.3	146.6	158.9	164.0	172.5	180.7	182.3	153.1	139.8
Processed vegetables	112.2	117.9	121.8	122.7	124.4	124.9	125.5	126.3	125.9	125.0	124.6
Cereals & bakery products	122.1	125.6	128.9	129.7	130.4	131.5	132.1	133.3	134.1	134.6	135.0
Sugar & sweets	114.0	116.0	117.8	118.0	117.9	118.1	119.2	120.1	120.6	120.8	121.3
<b>Beverages, nonalcoholic</b>	107.5	108.1	111.3	111.3	111.8	111.5	111.6	112.3	111.2	111.0	111.8
<b>Apparel</b>											
Apparel, commodities less foot	114.4	119.9	113.4	118.1	120.0	119.3	116.1	112.8	112.8	118.9	121.8
Footwear	109.9	115.9	112.7	114.1	115.3	114.9	114.0	113.4	112.6	114.1	117.6
Tobacco & smoking products	145.8	149.3	158.5	159.2	159.5	161.1	164.2	167.5	168.8	168.2	168.8
<b>Beverages, alcoholic</b>	118.6	119.8	121.1	121.8	122.3	123.1	123.5	124.0	124.5	124.8	125.2

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 786-3313.



Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1988			1989				
	1986	1987	1988 R	Oct	Apr	May R	June	July	Aug	Sept	Oct
	1982 = 100										
Finished goods 1/	103.2	105.4	108.0	109.4	113.0	114.2	114.3	114.0	113.3	113.5	114.8
Consumer foods	107.2	109.5	112.6	114.6	117.7	119.1	118.6	119.0	118.7	118.5	119.5
Fresh fruit	112.9	112.0	113.5	111.8	111.5	112.5	115.4	114.1	107.3	107.7	113.3
Fresh & dried vegetables	97.8	103.7	105.5	111.9	119.3	142.9	128.9	124.6	110.7	96.1	110.0
Dried fruit	91.9	95.0	99.1	97.4	102.3	102.3	102.8	102.8	103.3	105.4	103.4
Canned fruit & juice	111.0	115.3	120.2	120.6	121.7	122.1	122.5	123.4	123.3	123.2	122.8
Frozen fruit & juice	103.0	113.3	129.8	129.6	120.8	123.7	128.4	129.0	129.1	127.4	125.6
Fresh veg. excl. potatoes	99.3	99.0	100.4	101.0	107.1	140.4	117.0	110.5	96.3	81.5	101.0
Canned veg. & juices	101.2	103.5	108.3	114.3	118.8	119.1	118.6	118.9	118.5	118.4	118.0
Frozen vegetables	106.6	107.3	108.6	111.4	115.0	115.4	115.7	115.5	116.7	116.3	115.2
Potatoes	104.0	120.1	113.9	134.6	152.7	150.8	161.8	157.8	144.3	140.2	140.2
Eggs	99.5	87.6	88.6	107.4	110.8	107.0	104.8	111.0	116.7	124.6	124.3
Bakery products	116.6	118.4	126.4	130.0	133.6	134.4	134.8	135.3	137.3	137.8	137.9
Meats	93.9	100.4	99.9	98.2	103.1	103.7	104.0	105.8	106.1	105.2	104.8
Beef & veal	88.1	95.5	101.4	102.4	112.1	111.8	107.5	108.1	109.2	107.6	105.1
Pork	99.9	104.9	95.0	88.3	88.5	90.5	97.5	101.9	100.4	99.3	102.2
Processed poultry	116.7	103.4	111.6	122.7	124.9	133.0	132.5	125.9	120.0	120.2	113.7
Fish	124.9	140.0	148.7	147.4	150.9	149.3	134.8	137.3	139.9	137.7	146.7
Dairy products	99.9	101.6	102.2	104.9	105.6	105.6	106.4	107.8	110.8	112.9	116.5
Processed fruits & vegetables	104.9	108.6	113.8	116.5	119.0	119.8	120.5	120.8	121.0	120.9	120.2
Shortening & cooking oil	103.3	103.9	118.8	120.9	117.5	119.7	116.7	117.1	113.9	115.5	114.6
Consumer finished goods less foods	98.4	100.7	103.1	104.1	108.8	110.3	110.4	109.7	108.4	109.0	110.3
Beverages, alcoholic	110.1	110.3	111.8	112.3	115.6	116.6	116.8	116.9	117.2	114.2	114.5
Soft drinks	109.5	111.8	114.3	115.6	118.1	118.1	117.4	117.5	116.2	115.8	117.5
Apparel	106.3	108.3	111.7	112.7	113.8	114.0	114.1	114.2	114.7	115.0	115.2
Footwear	106.8	109.3	115.1	116.4	120.0	119.9	119.9	120.6	121.9	122.2	122.6
Tobacco products	142.4	154.6	171.9	175.6	187.3	187.4	196.8	196.8	198.7	198.7	200.7
Intermediate materials 2/	99.1	101.5	107.1	108.6	112.4	112.7	112.7	112.6	112.1	112.4	112.3
Materials for food manufacturing	98.4	100.8	106.0	108.3	111.1	112.5	112.4	112.9	113.2	114.0	113.3
Flour	94.5	92.9	105.7	114.6	113.6	116.1	116.8	115.0	114.3	113.3	112.4
Refined sugar 3/	103.2	106.4	108.9	112.3	115.8	116.9	117.6	118.1	118.5	121.1	120.6
Crude vegetable oils	84.8	84.2	116.6	115.1	107.8	115.0	103.2	100.3	96.2	99.5	94.1
Crude materials 4/	87.7	93.7	96.0	95.9	104.4	106.1	104.1	103.7	101.0	102.0	101.8
Foodstuffs & feedstuffs	93.2	96.2	106.1	111.9	111.6	114.9	111.7	109.7	109.5	108.3	107.2
Fruits & vegetables 5/	103.9	106.8	108.5	111.3	115.3	129.9	122.3	119.4	108.7	100.7	110.9
Grains	79.2	71.1	97.9	114.2	109.8	114.1	105.8	105.1	100.3	100.1	98.2
Livestock	91.8	102.0	103.3	101.8	106.4	107.4	106.0	104.3	108.3	103.2	104.1
Poultry, live	129.6	101.2	121.5	141.0	138.4	155.0	148.5	135.5	125.4	134.9	109.0
Fibers, plant & animal	88.3	106.4	98.4	89.7	105.0	109.1	110.5	111.4	116.7	113.9	116.9
Fluid milk	90.9	91.8	89.4	94.3	90.2	89.7	91.0	92.1	95.9	100.7	105.1
Oilseeds	91.4	99.2	134.0	141.1	130.7	137.5	127.5	129.7	115.3	113.6	101.7
Tobacco, leaf	89.7	85.7	87.2	93.1	93.7	93.7	93.7	93.7	91.8	97.0	95.0
Sugar, raw cane	104.9	110.2	111.9	110.7	112.3	113.8	115.4	118.5	118.3	119.0	117.8
All commodities	100.1	102.8	106.9	108.2	112.3	113.2	112.9	112.7	112.0	112.3	112.7
Industrial commodities	99.9	102.5	106.3	107.1	111.8	112.4	112.4	112.2	111.4	111.9	112.4
All foods 6/	105.3	107.8	111.5	113.5	116.8	118.3	117.6	118.1	117.8	117.7	118.4
Farm products & processed foods & feeds	101.2	103.7	110.0	113.5	115.0	116.8	115.4	115.4	114.9	114.4	114.3
Farm products	92.9	95.5	104.9	110.9	111.0	115.1	111.8	110.0	108.7	107.3	106.9
Processed foods & feeds 6/	105.4	107.9	112.7	115.0	117.2	117.9	117.4	118.2	118.0	118.1	118.1
Cereal & bakery products	111.0	112.6	123.0	126.4	129.1	130.8	131.2	132.1	133.1	132.9	132.9
Sugar & confectionery	109.6	112.6	114.7	116.5	119.2	119.6	120.7	121.5	121.3	121.8	120.4
Beverages	114.5	112.5	114.3	115.3	119.2	119.7	119.6	119.3	118.5	117.1	117.5

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). R = revised.

# Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual				1988		1989				1990
	1985	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct
Market basket 1/											
Retail cost (1982-84=100)	104.1	106.3	111.6	116.5	119.3	124.7	124.7	125.2	125.4	125.5	125.9
Farm value (1982-84=100)	96.2	94.9	97.1	100.3	102.7	109.0	106.8	108.4	107.0	105.9	105.7
Farm-retail spread (1982-84=100)	108.3	112.5	119.4	125.3	128.2	133.1	134.4	134.2	135.4	136.0	136.8
Farm value-retail cost (%)	32.4	31.2	30.5	30.1	30.2	30.6	30.0	30.3	29.9	29.6	29.4
Meat products											
Retail cost (1982-84=100)	98.9	102.0	109.6	112.2	113.0	115.6	116.1	116.7	117.5	117.7	118.1
Farm value (1982-84=100)	91.3	94.3	101.2	99.5	97.6	103.2	103.6	103.4	104.3	101.5	100.8
Farm-retail spread (1982-84=100)	106.7	109.8	118.3	125.2	128.8	128.3	128.9	130.3	131.1	134.3	135.8
Farm value-retail cost (%)	46.8	46.8	46.7	44.9	43.7	45.2	45.2	44.9	4.9	43.7	43.2
Dairy products											
Retail cost (1982-84=100)	103.2	103.3	105.9	108.4	109.9	113.8	113.6	114.1	114.5	116.1	118.2
Farm value (1982-84=100)	95.2	92.6	93.3	90.4	94.2	91.7	92.5	94.1	98.2	101.0	102.2
Farm-retail spread (1982-84=100)	110.5	113.3	117.5	124.9	124.4	134.2	133.0	132.6	129.5	130.1	132.9
Farm value-retail cost (%)	44.2	43.0	42.3	40.0	41.1	38.6	39.1	39.6	41.1	41.7	41.5
Poultry											
Retail cost (1982-84=100)	106.2	114.2	112.6	120.7	129.4	137.3	140.1	138.1	136.2	134.0	131.2
Farm value (1982-84=100)	105.9	115.1	93.8	110.4	124.8	143.5	136.8	126.1	117.8	118.6	101.6
Farm-retail spread (1982-84=100)	106.6	113.3	134.2	132.6	134.7	130.1	143.9	152.0	157.4	151.7	165.3
Farm value-retail cost (%)	53.3	53.9	44.6	49.0	51.6	55.9	52.2	48.9	46.3	47.4	41.4
Eggs											
Retail cost (1982-84=100)	91.0	97.2	91.5	93.6	105.5	112.6	110.6	112.8	115.2	124.6	122.9
Farm value (1982-84=100)	85.7	92.4	76.8	76.7	87.6	93.3	95.5	97.3	110.3	110.7	110.3
Farm-retail spread (1982-84=100)	100.4	106.0	117.9	123.9	137.6	147.2	137.7	140.7	123.9	149.6	145.5
Farm value-retail cost (%)	60.5	61.0	53.9	52.7	53.4	53.2	55.5	55.4	61.5	57.1	57.7
Cereal & bakery products											
Retail cost (1982-84=100)	107.9	110.9	114.8	122.1	125.6	131.5	132.1	133.3	134.1	134.6	135.0
Farm value (1982-84=100)	94.3	76.3	71.0	92.3	98.8	104.2	103.6	102.7	99.4	99.9	99.6
Farm-retail spread (1982-84=100)	109.8	115.7	120.9	126.3	129.3	135.3	136.1	137.6	138.9	139.4	139.9
Farm value-retail cost (%)	10.7	8.4	7.6	9.3	9.6	9.7	9.6	9.4	9.1	9.1	9.0
Fresh fruits											
Retail cost (1982-84=100)	118.4	120.4	135.6	145.4	151.9	157.3	152.6	152.3	154.5	158.8	159.8
Farm value (1982-84=100)	110.8	103.8	113.9	113.3	104.6	101.9	89.8	104.5	107.2	124.9	131.6
Farm-retail spread (1982-84=100)	121.8	128.0	145.7	160.2	173.8	182.9	181.6	174.4	176.3	174.4	172.8
Farm value-retail cost (%)	29.6	27.4	26.5	24.6	21.7	20.5	18.6	21.7	21.9	24.8	26.0
Fresh vegetables											
Retail costs (1982-84=100)	103.5	107.7	121.6	129.3	129.4	153.2	150.8	150.8	145.1	133.9	134.8
Farm value (1982-84=100)	93.1	90.0	112.0	105.8	97.7	153.4	133.0	158.3	127.0	94.8	113.7
Farm-retail spread (1982-84=100)	108.9	116.8	126.5	141.3	145.7	153.1	160.0	147.0	154.4	154.0	145.7
Farm value-retail cost (%)	30.5	28.4	31.3	27.8	25.6	34.0	29.9	35.6	29.7	24.0	28.6
Processed fruits & vegetables											
Retail cost (1982-84=100)	107.0	105.3	109.0	117.6	121.4	124.9	125.4	126.0	126.3	126.4	125.9
Farm value (1982-84=100)	117.7	101.5	111.1	136.5	146.3	132.7	132.9	136.7	133.2	136.7	131.6
Farm-retail spread (1982-84=100)	103.7	106.4	108.3	111.7	113.6	122.5	123.1	122.6	124.1	123.2	122.6
Farm value-retail costs (%)	26.2	22.9	24.2	27.6	28.7	25.3	25.2	25.8	25.1	25.7	25.8
Fats & oils											
Retail cost (1982-84=100)	108.9	106.5	108.1	113.1	117.1	121.6	121.6	121.6	121.7	121.3	121.6
Farm value (1982-84=100)	104.3	76.2	74.1	103.3	100.9	107.1	99.2	92.0	80.2	87.9	86.7
Farm-retail spread (1982-84=100)	110.6	117.6	120.6	116.7	123.1	126.9	129.8	132.5	137.0	133.6	134.4
Farm value-retail cost (%)	25.8	19.2	18.6	24.6	23.2	23.7	21.9	20.3	17.7	19.5	19.2
	Annual				1988		1989				1990
	1985	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct
Beef, Choice											
Retail price 2/ (cts./lb.)	232.6	230.7	242.5	254.7	257.8	271.9	268.1	271.6	269.5	270.9	270.8
Net carcass value 3/ (csts.)	135.2	133.1	145.3	153.9	155.4	167.7	158.5	156.4	155.6	152.3	153.8
Net farm value 4/ (csts.)	126.8	124.4	137.9	147.4	148.8	160.9	152.5	149.9	152.2	144.2	148.3
Farm-retail spread (csts.)	105.8	106.3	104.6	107.3	109.0	111.0	115.6	121.7	117.3	126.7	122.5
Carcass-retail 5/ (csts.)	97.4	97.6	97.2	100.8	102.5	104.2	109.6	115.2	113.9	118.6	117.0
Farm-carcass 6/ (csts.)	8.4	8.7	7.4	6.5	6.5	6.8	6.0	6.5	3.4	8.1	5.5
Farm value-retail price (%)	55	54	57	58	58	59	57	55	56	53	55
Pork											
Retail price 2/ (csts./lb.)	162.0	178.4	188.4	183.4	181.6	177.1	179.1	182.8	184.6	184.4	185.8
Wholesale value 3/ (csts.)	101.1	110.9	113.0	101.0	95.8	95.5	99.6	100.6	101.3	100.6	106.1
Net farm value 4/ (csts.)	71.4	82.4	82.7	69.4	62.2	68.4	74.0	75.2	74.6	70.3	75.6
Farm-retail spread (csts.)	90.6	96.0	105.7	114.0	119.4	108.7	105.1	107.6	110.0	114.1	110.2
Wholesale-retail 5/ (csts.)	60.9	67.5	75.4	82.4	85.8	81.6	79.5	82.2	83.3	83.8	79.7
Farm-wholesale 6/ (csts.)	29.7	28.5	30.3	31.6	33.6	27.1	25.6	25.4	26.7	30.3	30.5
Farm value-retail price (%)	44	46	44	38	34	39	41	41	40	38	41

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Prices from BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bon byproducts. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 786-1870, Ron Gustafson (202) 786-1286.

**Table 9.—Price Indexes of Food Marketing Costs**  
(See the December 1989 issue.)  
Information contact: Denis Dunham (202) 786-1870

## Livestock & Products

**Table 10.—U.S. Meat Supply & Use**

	Beg. stocks	Production 1/	Imports	Total supply	Exports	Ship- ments	Ending stocks	Consumption		Primary market price 3/
								Total	Per capita 2/	
									Pounds	
Million pounds 4/										
Beef										
1987	412	23,566	2,269	26,247	604	52	386	25,205	73.4	64.60
1988	386	23,589	2,379	26,354	680	64	422	25,188	72.1	69.54
1989 F	422	23,038	2,125	25,585	993	60	325	24,213	68.7	72-73
1990 F	325	23,240	2,080	25,645	1,120	60	325	24,140	67.9	71-77
Pork										
1987	248	14,374	1,195	15,817	109	124	347	15,237	59.1	51.69
1988	347	15,684	1,137	17,198	195	126	413	16,434	63.1	43.39
1989 F	413	15,865	920	17,253	250	140	370	16,438	62.7	43-44
1990 F	370	16,061	1,000	17,431	215	140	375	16,701	63.1	41-47
Veal 5/										
1987	7	429	24	460	7	1	4	449	1.5	78.05
1988	4	396	27	427	10	2	5	410	1.4	89.79
1989 F	5	358	0	363	0	1	5	357	1.2	91-92
1990 F	5	354	0	359	0	1	4	354	1.2	92-98
Lamb & mutton										
1987	13	315	44	372	2	2	8	360	1.3	78.09
1988	8	335	51	394	1	1	6	386	1.4	68.84
1989 F	6	340	60	406	2	0	7	397	1.4	68-69
1990 F	7	336	63	406	1	1	7	397	1.4	66-72
Total red meat										
1987	679	38,684	3,533	42,897	722	179	744	41,251	135.3	--
1988	745	40,004	3,594	44,343	886	193	846	42,418	137.9	--
1989 F	846	39,601	3,105	43,552	1,239	201	707	41,405	133.9	--
1990 F	707	39,991	3,143	43,841	1,336	202	711	41,592	133.6	--
Broilers										
1987	24	15,594	0	15,618	752	151	25	14,691	60.2	47.4
1988	25	16,180	0	16,205	765	156	36	15,248	61.9	56.3
1989 F	36	17,270	0	17,306	935	140	35	16,195	65.1	59-60
1990 F	35	18,549	0	18,584	960	140	30	17,454	69.6	49-55
Mature chicken										
1987	163	639	0	802	15	2	188	597	2.4	--
1988	188	638	0	826	26	3	157	641	2.6	--
1989 F	157	630	0	787	23	4	150	610	2.5	--
1990 F	150	638	0	788	20	4	150	614	2.4	--
Turkeys										
1987	178	3,828	0	4,006	33	4	266	3,707	15.2	57.8
1988	266	3,968	0	4,234	51	5	250	3,928	15.9	61.5
1989 F	250	4,216	0	4,466	42	4	260	4,160	16.7	65-66
1990 F	260	4,430	0	4,690	48	4	280	4,358	17.4	57-63
Total poultry										
1987	365	20,065	0	20,430	800	157	479	18,994	77.8	--
1988	479	20,786	0	21,265	842	163	442	19,818	80.4	--
1989 F	442	22,116	0	22,558	1,000	148	445	20,965	84.3	--
1990 F	445	23,617	0	24,062	1,028	148	460	22,426	89.4	--
Red meat & poultry										
1987	1,044	58,749	3,532	63,326	1,521	343	1,224	60,238	213.1	--
1988	1,224	60,790	3,594	65,608	1,728	356	1,288	62,235	218.3	--
1989 F	1,288	61,717	3,105	66,110	2,239	349	1,152	62,370	218.2	--
1990 F	1,152	63,608	3,143	67,903	2,364	350	1,171	64,018	223.0	--

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry.  
2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .71 for 1987, & 70.5 for 1988-90.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. -- = not available.

Information contacts: Polly Cochran, or Maxine Davis (202) 786-1284.



Table 11.—U.S. Egg Supply &amp; Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Ship- ments	Hatch- ing use	Ending stocks	Consumption		Wholesale price*
									Total	Per capita	
Million dozen											Cts./doz.
1985	11.1	5,688.0	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.3	66.4
1986	10.7	5,705.0	13.7	5,729.4	101.6	28.0	566.8	10.4	5,022.6	249.4	71.1
1987	10.4	5,802.3	5.6	5,818.3	111.2	25.1	599.1	14.4	5,068.5	249.3	61.6
1988	14.4	5,771.6	5.3	5,791.3	141.8	26.0	604.6	15.2	5,003.7	243.7	62.1
1989 F	15.2	5,587.5	28.5	5,631.2	99.1	24.0	641.1	10.0	4,857.0	234.4	78-82
1990 F	10.0	5,700.0	12.0	5,722.0	104.0	25.0	675.0	10.0	4,908.0	234.8	67-71

\* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

	Pro-duction	Farm use	Commercial		Im-ports	Total commercial supply	CCC net removals	Commercial		All milk price <sup>2/</sup>
			Farm market-ings	Beg. stocks				Ending stocks	Disap-pearance	
										\$/cwt
			Billion pounds							
1981	132.8	2.3	130.5	5.8	2.3	138.5	12.9	5.4	120.3	13.77
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.7	2.4	137.3	4.6	2.6	144.5	16.8	5.2	122.5	13.58
1984	135.4	2.9	132.5	5.2	2.7	140.5	8.6	4.9	126.9	13.46
1985	143.1	2.5	140.7	4.9	2.8	148.4	13.2	4.6	130.6	12.75
1986	143.4	2.4	141.0	4.6	2.7	148.3	10.6	4.2	133.5	12.51
1987	142.5	2.2	140.3	4.2	2.5	146.9	6.7	4.6	135.6	12.54
1988	145.5	2.2	143.3	4.6	2.4	150.3	8.9	4.3	137.1	12.24
1989 F	145.2	2.2	142.9	4.3	2.4	159.7	9.0	4.2	136.5	13.40

<sup>1/</sup> Milkfat basis. Totals may not add because of rounding. <sup>2/</sup> Delivered to plants & dealers; does not reflect deductions. F = forecast.

Table 13.—Poultry &amp; Eggs

	Annual			1988		1989				
	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct
<b>Broilers</b>										
Federally inspected slaughter, certified (mil. lb.)	14,265.6	15,502.5	15,984.0	1,379.1	1,538.5	1,514.5	1,365.0	1,604.9	1,424.0	1,478.7
Wholesale price, 12-city (cts./lb.)	56.9	47.4	56.3	55.6	70.4	67.4	62.0	57.3	59.9	51.7
Price of grower feed (\$/ton)	187	186	220	255	238	237	236	233	239	223
Broiler-feed price ratio 1/	3.7	3.7	3.1	2.8	3.8	3.6	3.3	3.1	3.1	2.7
Stocks beginning of period (mil. lb.)	26.6	23.9	24.8	32.0	37.9	35.3	34.3	34.9	39.7	35.9
Broiler-type chicks hatched (mil.) 2/	5,013.3	5,379.2	5,588.7	456.8	522.9	509.8	511.8	509.3	484.0	483.7
<b>Turkeys</b>										
Federally inspected slaughter, certified (mil. lb.)	3,133	3,717	3,903	395.7	356.9	388.6	360.4	430.3	385.6	421.2
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	72.2	57.8	61.3	79.6	73.0	73.0	66.4	62.6	57.9	67.8
Price of turkey grower feed (\$/ton)	215	213	243	266	255	251	251	250	249	243
Turkey-feed price ratio 1/	4.1	3.9	3.0	3.6	3.4	3.5	3.3	3.3	3.0	3.2
Stocks beginning of period (mil. lb.)	150.2	178.2	282.4	572.8	298.5	355.6	454.6	496.7	574.3	569.3
Poults placed in U.S. (mil.)	225.4	240.4	242.0	16.8	28.6	29.1	26.5	23.0	19.9	20.1
<b>Eggs</b>										
Farm production (mil.)	68,460	69,627	69,253	5,833	5,683	5,478	5,626	5,591	5,433	5,649
Average number of layers (mil.)	278	280	286	276	267	266	266	266	267	269
Rate of lay (eggs per layer on farms)	248	248	251	21.2	21.3	20.6	21.2	21.0	20.4	21.0
Cartoned price, New York, grade A large (cts./doz.) 3/	71.1	61.6	62.1	66.0	73.7	75.2	76.5	84.2	83.8	84.8
Price of laying feed (\$/ton)	174	170	202	222	210	211	210	209	209	200
Egg-feed price ratio 1/	7.0	7.6	5.3	5.3	5.9	6.0	6.1	6.8	6.8	7.1
<b>Stocks, first of month</b>										
Shell (mil. doz.)	.72	1.16	1.29	.69	.54	.78	.81	.36	.51	.69
Frozen (mil. doz.)	10.0	9.8	13.1	16.9	11.7	12.3	11.4	12.5	11.4	10.9
<b>Replacement chicks hatched (mil.)</b>	424	428	366	31.0	38.3	34.7	30.2	32.4	32.7	33.3

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 12 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

	Annual			1988		1989					
	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct	
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.30	11.23	11.03	11.88	11.12	11.33	11.76	12.37	13.10	13.87	
Wholesale prices											
Butter, grade A Chi. (cts./lb.)	144.5	140.2	132.5	132.0	131.0	131.0	130.3	132.8	125.1	120.5	
Am. cheese, Wis. assembly pt. (cts./lb.)	127.3	123.2	123.8	136.4	123.9	130.8	140.6	143.2	155.8	160.3	
Nonfat dry milk (cts./lb.) 2/	80.6	79.3	80.2	88.8	84.5	88.5	96.2	110.7	121.7	139.9	
USDA net removals											
Total milk equiv. (mil. lb.) 3/	10,628.1	6,706.0	8,856.2	339.1	1,468.3	863.5	167.1	-69.5	162.9	158.4	
Butter (mil. lb.)	287.6	187.3	312.6	15.2	66.4	40.3	7.7	-5.1	7.7	7.4	
Am. cheese (mil. lb.)	468.4	282.0	238.1	2.2	9.3	2.9	.2	3.1	0	0	
Nonfat dry milk (mil. lb.)	827.3	559.4	267.5	0	0	0	0	0	0	0	
Milk											
Milk prod. 21 States (mil. lb.)	121,433	121,294	123,896	10,125	11,095	10,435	10,293	10,135	9,736	9,926	
Milk per cow (lb.)	13,399	13,955	14,378	1,179	1,305	1,228	1,211	1,194	1,149	1,169	
Number of milk cows (1,000)	9,063	8,692	8,617	8,591	8,505	8,501	8,497	8,490	8,474	8,492	
U.S. milk production (mil. lb.)	143,381	142,557	145,527	6/11,893	6/13,043	6/12,268	6/12,117	6/11,931	6/11,482	6/11,655	
Stock, beginning											
Total (mil. lb.)	13,695	12,867	7,440	9,761	11,870	13,245	13,937	13,817	13,308	12,102	
Commercial (mil. lb.)	4,590	4,165	4,646	4,872	5,140	5,763	5,888	5,899	5,809	5,228	
Government (mil. lb.)	9,105	8,702	2,794	4,889	6,729	7,482	8,048	7,918	7,499	6,874	
Imports, total (mil. lb.) 3/	2,733	2,490	2,394	210	162	179	194	240	226	--	
Commercial disappearance (mil. lb.)	133,498	135,657	137,187	11,911	10,925	11,275	11,944	12,141	11,943	--	
Butter											
Production (mil. lb.)	1,202.4	1,104.1	1,207.5	92.3	122.5	95.3	72.2	80.1	82.1	92.7	
Stocks, beginning (mil. lb.)	205.5	193.0	143.2	253.4	379.1	438.3	464.2	461.0	439.2	407.6	
Commercial disappearance (mil. lb.)	922.9	902.5	909.8	86.2	35.3	53.4	60.8	88.5	78.7	--	
American cheese											
Production (mil. lb.)	2,798.2	2,716.7	2,756.6	220.9	247.0	240.0	226.8	214.0	200.3	206.8	
Stocks, beginning (mil. lb.)	850.2	697.1	370.4	354.7	288.7	311.8	317.4	315.9	306.4	273.8	
Commercial disappearance (mil. lb.)	2,382.8	2,437.1	2,570.0	235.4	220.4	237.3	227.8	220.4	233.4	--	
Other cheese											
Production (mil. lb.)	2,411.1	2,627.7	2,815.0	249.1	247.9	245.6	237.8	246.4	246.8	246.3	
Stocks, beginning (mil. lb.)	94.1	92.0	89.7	106.5	117.0	115.8	120.4	118.3	117.6	98.8	
Commercial disappearance (mil. lb.)	2,684.9	2,880.2	3,034.1	270.4	265.9	258.7	259.8	271.8	291.4	--	
Nonfat dry milk											
Production (mil. lb.)	1,284.1	1,056.8	978.5	56.8	99.8	81.0	60.8	53.9	46.3	48.0	
Stocks, beginning (mil. lb.)	1,011.1	686.8	177.2	63.6	100.8	100.7	78.3	66.9	56.9	44.6	
Commercial disappearance (mil. lb.)	479.1	492.9	733.1	51.7	99.4	101.9	71.6	63.8	59.1	--	
Frozen dessert											
Production (mil. gal.) 4/	1,248.6	1,260.7	1,246.9	90.0	122.6	128.4	122.5	122.1	101.2	90.3	
	Annual			1988				1989			
	1986	1987	1988	I	II	III	IV	I	II P	III P	
Milk production (mil. lb.)	143,381	142,557	145,527	36,197	37,871	36,025	35,434	36,647	37,972	35,530	
Milk per cow (lb.)	13,260	13,802	14,213	3,519	3,697	3,526	3,471	3,611	3,755	3,516	
No. of milk cows (1,000)	10,813	10,329	10,239	10,285	10,244	10,218	10,208	10,148	10,112	10,104	
Milk-feed price ratio 5/	1.73	1.83	1.58	1.74	1.51	1.46	1.59	1.56	1.48	1.62	
Returns over concentrate 5/ costs (\$/cwt milk)	9.23	9.52	9.05	9.34	8.33	8.53	9.86	9.63	8.80	9.80	

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. -- = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1988		1989				
	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct P
U.S. wool price, 1/ (cts./lb.)	191	265	438	463	375	365	350	350	350	350
Imported wool price, 2/ (cts./lb.)	201	247	372	378	339	323	325	330	333	335
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	126,768	129,677	117,069	9,176	8,700	11,908	9,332	9,741	10,767	9,931
Carpet wool (1,000 lb.)	9,960	13,092	15,633	977	1,362	1,517	1,155	1,472	1,794	1,288

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. P = preliminary.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1988		1989				
	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	7,920	7,643	8,066	7,144	7,847	7,555	7,010	6,568	6,431	6,748
Placed on feed (1,000 head)	20,035	21,040	20,584	2,475	1,619	1,268	1,311	1,618	1,928	2,682
Marketings (1,000 head)	19,263	19,410	19,698	1,601	1,747	1,751	1,690	1,679	1,564	1,628
Other disappearance (1,000 head)	1,049	1,207	1,187	84	164	62	63	76	47	71
Beef steer-corn price ratio, Omaha 2/	31.4	41.0	31.5	26.4	29.4	28.9	29.6	32.0	30.8	31.1
Hog-corn price ratio, Omaha 2/	27.9	32.8	19.6	14.9	16.8	18.5	19.6	20.9	19.8	20.8
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha	57.74	64.60	69.54	69.13	74.52	71.71	70.74	71.09	68.44	69.69
Utility cows, Omaha	37.22	44.83	46.55	47.71	45.57	48.56	49.12	49.13	52.42	49.42
Choice vealers, S. St. Paul 3/	59.92	78.92	90.23	213.75	260.05	258.44	246.88	263.00	258.75	244.38
Feeder cattle										
Choice, Kansas City, 600-700 lb.	62.79	75.36	83.67	85.81	83.50	85.38	87.13	88.40	88.63	88.25
Slaughter hogs										
Barrows & gilts, 7-markets	51.19	51.69	43.39	38.95	42.37	46.10	47.06	46.84	44.32	47.15
Feeder pigs										
S. Mo. 40-50 lb. (per head)	45.62	46.69	36.06	30.95	34.24	28.85	24.25	30.00	30.72	37.27
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	69.46	78.09	68.26	63.94	73.56	72.63	67.79	67.28	63.81	59.63
Ewes, Good, San Angelo	35.10	38.62	38.88	36.88	38.95	37.10	31.92	30.65	30.31	28.00
Feeder lambs										
Choice, San Angelo	80.62	102.26	90.89	80.38	78.18	75.94	74.08	75.50	76.06	74.88
Wholesale meat prices, Midwest										
Choice steer beef, 600-700 lb.	88.98	97.24	103.34	104.36	112.62	106.35	104.91	104.31	102.08	103.13
Canner & cutter cow beef	73.10	85.26	87.77	85.58	89.74	93.83	95.24	95.33	99.14	96.14
Pork loins, 14-18 lb. 4/	104.78	106.23	97.49	85.33	99.95	108.28	115.10	110.03	105.25	111.78
Pork bellies, 12-14 lb.	65.82	63.11	41.25	34.96	29.11	32.90	31.52	28.82	34.23	36.88
Hams, skinned, 14-17 lb.	80.01	80.96	71.03	78.33	63.30	64.00	64.23	68.00	69.13	80.56
All fresh beef retail price 5/	--	212.64	224.81	231.10	239.44	237.30	240.57	240.11	241.00	241.20
Commercial slaughter (1,000 head)*										
Cattle	37,288	35,647	35,079	2,966	3,024	3,025	2,794	3,045	2,772	2,964
Steers	17,516	17,443	17,344	1,368	1,521	1,506	1,385	1,491	1,352	1,373
Heifers	11,097	10,906	10,754	965	907	952	903	972	873	931
Cows	7,961	6,610	6,337	573	540	508	452	519	489	596
Bulls & stags	714	689	644	59	56	59	54	63	58	64
Calves	3,408	2,815	2,506	206	163	167	174	195	179	198
Sheep & lambs	5,635	5,199	5,293	452	447	437	413	494	457	484
Hogs	79,598	81,081	87,795	8,096	7,480	7,079	6,295	7,587	7,680	8,032
Commercial production (mil. lb.)										
Beef	24,213	23,405	23,424	2,007	1,998	2,022	1,889	2,091	1,912	2,041
Veal	509	416	387	34	29	29	27	29	28	31
Lamb & mutton	331	309	329	30	28	26	25	29	28	28
Pork	13,998	14,312	15,623	1,443	1,341	1,266	1,107	1,333	1,349	1,421
	Annual			1988			1989			
	1986	1987	1988	I	III	IV	I	II	III	IV
Cattle on feed (13 States)										
Number on feed (1,000 head) 1/	9,754	9,245	9,769	9,385	9,001	8,591	9,408	9,678	8,455	8,061
Placed on feed (1,000 head)	23,583	24,894	24,353	5,893	5,986	6,650	6,212	5,177	5,689	--
Marketings (1,000 head)	22,856	22,991	23,339	5,859	6,171	5,486	5,598	5,985	5,856	7/5,370
Other disappearance (1,000 head)	1,236	1,379	1,375	418	225	347	344	415	227	--
Hogs & pigs (10 States) 6/										
Inventory (1,000 head) 1/	41,100	39,690	42,995	41,345	44,065	45,000	43,210	41,605	44,100	45,800
Breeding (1,000 head) 1/	5,258	5,110	5,510	5,520	5,630	5,460	5,335	5,420	5,560	5,385
Market (1,000 head) 1/	35,842	34,580	37,485	35,825	38,435	39,540	37,875	36,185	38,540	40,415
Farrowings (1,000 head)	8,223	8,838	9,316	2,578	2,359	2,261	2,109	2,575	2,380	7/2,278
Pig crop (1,000 head)	63,835	68,888	71,848	20,175	18,007	17,295	16,439	20,256	18,604	--

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 7/ Intentions. \*Classes estimated. -- = not available.

Information contacts: Polly Cochran (202) 786-1284.



Table 17.—Supply & Utilization<sup>1,2</sup>

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside	Planted	Harvested									
	3/											5/
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
<b>Wheat</b>												
1984/85	18.3	79.2	66.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39
1985/86	18.8	75.6	64.7	37.5	2,425	3,866	279	767	915	1,961	1,905	3.08
1986/87	21.0	72.1	60.7	34.4	2,092	4,018	413	780	1,004	2,197	1,821	2.42
1987/88	23.9	65.8	56.0	37.7	2,107	3,945	281	811	1,592	2,684	1,261	2.57
1988/89*	22.5	65.5	53.2	34.1	1,811	3,095	143	830	1,424	2,397	698	3.72
1989/90*	9.7	76.6	62.1	32.9	2,042	2,760	200	842	1,275	2,317	443	3.80-3.95
<b>Rice</b>												
		Mil. acres		Lb./acre				Mil. cwt (rough equiv.)				\$/cwt
1984/85	.79	2.83	2.80	4,954	138.8	187.3	--	6/60.5	62.1	122.6	64.7	8.04
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	--	6/65.8	58.7	124.5	77.3	6.53
1986/87	1.48	2.38	2.36	5,651	133.4	213.3	--	6/77.7	84.2	161.9	51.4	3.75
1987/88	1.57	2.36	2.33	5,555	129.6	184.0	--	6/80.4	72.2	152.6	31.4	7.27
1988/89*	1.09	2.93	2.90	5,511	159.3	195.1	--	6/82.9	85.6	168.4	26.7	6.83
1989/90*	1.21	2.77	2.75	5,697	156.4	188.1	--	6/85.4	79.0	164.4	23.7	6.00-8.00
<b>Corn</b>												
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
1984/85	3.9	80.5	71.9	106.7	7,674	8,684	4,079	1,091	1,865	7,036	1,648	2.63
1985/86	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23
1986/87	14.3	76.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50
1987/88	23.0	65.7	59.2	119.4	7,072	11,958	4,738	1,229	1,732	7,699	4,259	1.94
1988/89*	20.5	67.6	58.2	84.6	4,921	9,185	3,950	1,245	2,060	7,255	1,930	2.54
1989/90*	10.1	72.3	65.1	116.6	7,590	9,523	4,200	1,275	2,150	7,625	1,898	2.10-2.40
<b>Sorghum</b>												
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
1984/85	.6	17.3	15.4	56.4	866	1,154	539	18	297	854	300	2.32
1985/86	.9	18.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93
1986/87	3.0	15.3	13.9	67.7	938	1,489	535	12	198	746	743	1.37
1987/88	4.1	11.8	10.6	69.7	739	1,483	564	25	231	820	663	1.70
1988/89*	3.9	10.4	9.1	63.8	578	1,240	470	22	310	802	438	2.27
1989/90*	2.9	11.9	10.5	59.8	629	1,067	500	15	250	765	302	1.95-2.25
<b>Barley</b>												
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
1984/85	.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29
1985/86	.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98
1986/87	2.1	13.1	12.0	50.8	611	944	298	174	137	608	336	1.61
1987/88	2.9	11.0	10.1	52.7	530	879	258	174	126	558	321	1.81
1988/89*	2.8	9.9	7.7	38.2	294	627	165	180	85	430	197	2.79
1989/90*	2.2	9.2	8.3	48.6	405	616	190	180	85	455	161	2.35-2.55
<b>Oats</b>												
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
1984/85	.1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67
1985/86	.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23
1986/87	.6	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21
1987/88	.8	18.0	6.9	54.0	374	553	361	79	1	441	112	1.56
1988/89*	.3	13.9	5.6	39.2	219	399	200	100	1	301	98	2.61
1989/90*	.3	12.1	6.8	54.3	371	524	300	110	2	412	112	1.40-1.60
<b>Soybeans</b>												
		Mil. acres		Bu./acre				Mil. bu.				\$/bu.
1984/85	0	67.8	66.1	28.1	1,861	2,037	7/93	1,030	598	1,721	316	5.84
1985/86	0	63.1	61.6	34.1	2,099	2,415	7/86	1,053	740	1,879	536	5.05
1986/87	0	60.4	58.3	33.3	1,940	2,476	7/104	1,179	757	2,040	436	4.78
1987/88	0	58.0	57.0	33.7	1,923	2,359	7/81	1,174	802	2,057	302	5.88
1988/89*	0	58.9	57.5	26.9	1,548	1,850	7/83	1,058	527	1,668	182	7.35
1989/90*	0	60.5	59.1	32.8	1,937	2,119	7/94	1,110	580	1,784	335	5.25-5.75
<b>Soybean oil</b>												
								Mil. lbs.				¢/cwt./lb.
1984/85	--	--	--	--	11,468	12,209	--	9,917	1,660	11,577	632	29.50
1985/86	--	--	--	--	11,617	12,257	--	10,053	1,257	11,310	947	18.00
1986/87	--	--	--	--	12,783	13,745	--	10,833	1,187	12,020	1,725	15.40
1987/88	--	--	--	--	12,974	9/14,895	--	10,930	1,873	12,803	2,092	22.65
1988/89*	--	--	--	--	11,737	9/13,967	--	10,591	1,661	12,252	1,715	21.10
1989/90*	--	--	--	--	12,220	9/13,950	--	11,000	1,450	12,450	1,500	19.00-22.00
<b>Soybean meal</b>												
								1,000 tons				10/ \$/ton
1984/85	--	--	--	--	24,529	24,784	--	19,480	4,917	24,397	387	125
1985/86	--	--	--	--	24,951	25,338	--	19,090	6,036	25,126	212	155
1986/87	--	--	--	--	27,758	27,970	--	20,387	7,343	27,730	240	163
1987/88	--	--	--	--	28,060	28,300	--	21,293	6,854	28,147	153	222
1988/89*	--	--	--	--	24,943	25,100	--	19,798	5,129	24,927	173	233
1989/90*	--	--	--	--	26,327	26,500	--	21,350	4,900	26,250	250	150-180

See footnotes at end of table.

Table 17.—Supply &amp; Utilization, continued

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside 3/	Planted	Harvested									
	Mil. acres			Lb./acre				Mil. bales				Cts./lb.
Cotton 1/												
1984/85	2.5	11.1	10.4	600	13.0	15.8	--	5.5	6.2	11.8	4.1	58.70
1985/86	3.6	10.7	10.2	630	13.4	17.6	--	6.4	2.0	8.4	9.4	56.50
1986/87	4.2	10.0	8.5	552	9.7	19.1	--	7.4	6.7	14.1	5.0	52.40
1987/88	4.0	10.4	10.0	706	14.8	19.8	--	7.6	6.6	14.2	5.8	64.30
1988/89*	2.2	12.5	11.9	619	15.4	21.2	--	7.8	6.2	13.9	7.1	55.50
1989/90*	3.5	10.5	9.5	608	12.1	19.2	--	8.2	7.5	15.7	3.6	--

\*December 12, 1989 Supply and Demand Estimates. 1/ Marketing Year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soybean meal & soybean oil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-92, & 0-92 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Average of crude soybean oil, Decatur. 9/ Includes 196 million pounds in imports for 1987/88, 140 million in 1988/89, and 15 million in 1989/90. 10/ Average of 44 percent, Decatur. 11/ Upland & extra long staple. Stock estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. -- = not available or not applicable.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1988	1989				
	1985/86	1986/87	1987/88	1988/89	Oct	June	July	Aug	Sept	Oct
Wholesale prices										
Wheat, No. 1 HRW										
Kansas City (\$/bu.) 2/	3.28	2.72	2.96	4.17	4.13	4.41	4.28	4.24	4.18	4.28
Wheat, DNS										
Minneapolis (\$/bu.) 2/	3.25	2.62	2.92	4.25	4.17	4.29	4.21	4.22	4.23	No Quote
Rice, S.W. La. (\$/cwt) 3/	16.11	10.25	19.25	14.85	14.50	15.50	15.60	16.40	15.90	15.55
Wheat										
Exports (mil. bu.)	915	1,004	1,592	1,424	102	92	140	138	160	93
Mill grind (mil. bu.)	703	755	753	778	70	60	61	74	68	72
Wheat flour production (mil. cwt)	314	335	336	348	31	27	27	32	30	32
Rice										
Exports (mil. cwt, rough equiv.)	58.7	84.2	72.2	85.6	6.6	4.0	1.1	5.5	8.5	--

	Marketing year 1/			1988				1989		
	1986/87	1987/88	1988/89	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug
Wheat										
Stocks, beginning (mil. bu.)	1,905	1,821	1,261	2,500.6	1,923.5	1,260.8	2,253.6	1,709.9	1,221.7	697.6
Domestic use										
Food (mil. bu.)	696	726	727	170.8	181.6	181.4	196.4	175.8	173.0	191.2
Seed, feed & residual (mil. bu.) 4/	497	366	246	-4.2	24.0	282.4	23.6	-43.0	-8.0	273.4
Exports (mil. bu.)	1,004	1,592	1,424	413.1	460.6	363.4	330.1	363.0	368.1	369.9

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. -- = not available.

Information contacts: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1988	1989				
	1985/86	1986/87	1987/88	1988/89	Oct	June	July	Aug	Sept	Oct
U.S. price, SLM,										
1-1/16 in. (cts./lb.) 2/	60.0	53.2	63.1	57.7	52.2	64.1	67.5	69.9	68.5	69.4
Northern Europe prices										
Index (cts./lb.) 3/	48.9	62.0	72.7	66.4	57.6	78.8	83.0	83.0	81.8	82.1
U.S. M 1-3/32 in. (cts./lb.) 4/	64.8	61.8	76.3	69.2	62.1	77.9	77.2	84.5	83.0	83.3
U.S. mill consumpt. (1,000 bales)	6,399	7,452	7,617	7,792	6,252	735	613	800	725	537
Exports (thou bales)	1,969	6,684	6,582	6,211	235	317	902	507	492	676
Stocks, beginning (1,000 bales)	4,102	9,348	5,026	5,771	603	9,749	8,698	7,093	6,179	5,577

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index; average of five lowest priced of 11 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed Grains

	Marketing year 1/				1988	1989				
	1984/85	1985/86	1986/87	1987/88	Oct	June	July	Aug	Sept	Oct
<b>Wholesale prices</b>										
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.79	2.35	1.64	2.14	2.81	2.66	2.50	2.30	2.32	2.36
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.46	3.72	2.73	3.40	4.17	4.15	3.96	3.92	4.73	3.91
Barley, feed, Duluth (\$/bu.) 2/	2.09	1.53	1.44	1.78	2.32	2.12	2.22	2.17	2.14	2.16
Barley, malting, Minneapolis (\$/bu.)	2.55	2.24	1.89	2.04	4.39	3.02	3.33	3.57	3.42	3.48
<b>Exports 3/</b>										
Corn (mil. bu.)	1,865	1,241	1,504	1,735	175.3	225.4	135.2	109.3	116.3	--
Feed grains (mil. metric tons) 4/	56.6	36.6	46.3	52.9	5.0	6.5	4.3	3.6	4.1	--
	Marketing year 1/				1988	1989				
	1984/85	1985/86	1986/87	1987/88	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug P	Sept-Nov
<b>Corn</b>										
Stocks, beginning (mil. bu.)	1,006	1,648	4,040	4,882	5,836	4,259	7,072	5,204	3,419	1,930
Domestic use										
Feed (mil. bu.)	4,079	4,095	4,714	4,735	839	1,334	1,077	849	690	--
Food, seed, ind. (mil. bu.)	1,091	1,160	1,192	1,229	324	294	284	337	330	--
Exports (mil. bu.)	1,865	1,241	1,504	1,720	414	482	508	600	470	--
Total use (mil. bu.)	7,036	6,496	7,410	7,690	1,577	2,109	1,869	1,787	1,490	--

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. P = preliminary. -- not available.

Information contact: Joy Harwood (202) 786-1840.

Table 21.—Fats &amp; Oils

	Marketing year *				1988	1989				
	1984/85	1985/86	1986/87	1987/88	Sept	May	June	July	Aug	Sept
<b>Soybeans</b>										
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.88	5.20	5.03	6.67	8.33	7.30	7.17	6.97	5.98	5.80
Crushings (mil. bu.)	1,030.5	1,052.8	1,178.8	1,174.5	79.9	87.0	76.0	74.0	75.6	74.1
Exports (mil. bu.)	598.2	740.7	756.9	801.6	26.9	23.6	31.6	16.7	18.3	17.9
Stocks, beginning (mil. bu.)	175.7	316.0	536.0	436.0	59.7	72.8	52.5	46.1	31.0	23.7
<b>Soybean oil</b>										
Wholesale price, crude, Decatur (cts./lb.)	29.52	18.02	15.36	22.92	25.6	22.23	20.75	19.66	18.08	18.8
Production (mil. lb.)	11,467.9	11,617.3	12,783.1	12,974.5	901.3	977.4	856.1	835.9	855.0	843.0
Domestic disp. (mil. lb.)	9,888.5	10,045.9	10,820.2	10,734.1	838.2	831.8	844.2	932.7	1,014.5	948.3
Exports (mil. lb.)	1,659.9	1,257.3	1,184.5	1,873.2	183.2	161.4	72.1	159.3	181.1	265.6
Stocks, beginning (mil. lb.)	720.5	632.5	946.6	1,725.0	2,212.4	2,759.0	2,743.2	2,683.1	2,426.9	2,086.3
<b>Soybean meal</b>										
Wholesale price, 44% protein, Decatur (\$/ton)	125.46	154.88	162.61	221.90	264.90	214.70	227.50	231.50	215.50	217.10
Production (1,000 ton)	24,529.3	24,951.3	27,758.8	28,060.2	1,897.8	2,061.2	1,802.9	1,749.2	1,804.4	1,744.0
Domestic disp. (1,000 ton)	19,481.3	19,117.2	20,387.4	21,275.9	1,567.9	1,565.1	1,664.6	1,568.2	1,740.1	1,563.5
Exports (1,000 ton)	4,916.5	6,009.3	7,343.0	6,871.0	441.0	532.4	180.8	134.0	177.1	159.7
Stocks, beginning (1,000 ton)	255.4	386.9	211.7	240.2	246.6	296.8	260.4	218.0	264.9	152.0
<b>Margarine, wholesale price, Chicago, white (cts./lb.)</b>										
	55.5	51.2	40.3	40.3	57.3	55.15	53.76	53.26	51.6	52.20

\* Beginning September 1 for soybeans; October 1 for soybean meal & oil; calendar year for margarine.

Information contacts: Roger Hoskin (202) 786-1840, Tom Bickerton (202) 786-1824.



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January-February 1990

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc). Net of CRP. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1984 PIK rates apply only to the 10-20 portion. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn in each year except 1988-90, when the oats ARP was lower than for the other feed grains. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Loan rate was not to be announced prior to August 1, 1989. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices. \* On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base to boost 1990 supplies. For every acre planted in excess of 95 percent of base, the acreage used to compute deficiency payments will be cut by 1 acre. -- = not available.

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Table 23.—Fruit

	1981	1982	1983	1984	1985	1986	1987	1988	1989 F			
Citrus 1/ Production (1,000 ton)	15,105	12,057	13,608	10,792	10,525	11,051	11,968	13,134	11,810			
Per capita consumpt. (lbs.) 2/	104.4	109.3	120.0	102.8	109.1	117.3	112.8	113.6	--			
Noncitrus 3/ Production (1,000 tons)	13,332	14,659	14,154	14,291	14,189	13,918	16,010	15,842	14,357			
Per capita consumpt. (lbs.) 2/	88.0	89.2	88.7	93.9	91.8	96.4	101.5	97.7	--			
	1988			1989								
	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
F.o.b. shipping point prices												
Apples (\$/carton) 4/	12.15	12.63	10.78	13.94	12.32	11.25	9.41	7.86	9.55	11.31	10.49	8.31
Pears (\$/box) 5/	12.48	12.33	9.70	10.58	10.75	9.73	13.67	14.38	--	--	--	11.10
Grower prices												
Oranges (\$/box) 6/	6.01	6.50	6.20	6.21	5.27	6.64	8.52	8.10	5.04	3.91	5.62	6.22
Grapefruit (\$/box) 6/	5.45	4.71	3.72	3.34	3.36	3.28	4.05	4.85	4.62	5.63	6.10	8.18
Stocks, ending												
Fresh apples (mil. lbs.)	3,904.3	3,265.8	2,659.6	2,094.6	1,544.2	1,069.1	619.3	347.3	174.9	8.0	2,522.0	4,501.9
Fresh pears (mil. lbs.)	368.3	295.5	234.6	162.9	115.1	57.7	26.6	6.4	11.0	157.9	446.2	436.9
Frozen fruits (mil. lbs.)	1,011.8	937.3	834.5	759.3	671.4	601.7	574.3	621.4	722.5	850.3	863.9	955.1
Frozen orange juice (mil. lbs.)	587.7	721.6	980.9	1,151.1	1,086.8	1,204.2	1,296.1	1,296.9	1,140.0	946.9	808.4	693.1

1/ Crop year beginning with year indicated. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. -- = not available.  
P = preliminary. F = forecast.

Information contact: Wynne Kapper (202) 786-1885.

Table 24.—Vegetables

	Calendar year													
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988				
Production														
Total vegetables (1,000 cwt) 1/	413,925	381,370	379,123	431,515	403,320	457,392	453,769	445,436	464,141	452,731				
Fresh (1,000 cwt) 1/ 2/	190,859	190,228	194,694	207,924	197,919	217,132	217,932	216,267	219,689	225,784				
Processed (tons) 3/	11,153,300	9,557,100	9,221,460	11,179,590	10,270,050	12,013,020	11,791,860	11,616,560	12,222,620	11,347,370				
Mushrooms (1,000 lbs.)	470,069	469,576	517,166	490,826	561,531	595,681	587,956	614,393	631,819	667,367				
Potatoes (1,000 cwt)	342,447	302,857	338,591	355,131	333,911	362,612	407,109	361,511	385,462	349,973				
Sweetpotatoes (1,000 cwt)	13,370	10,953	12,799	14,833	12,083	12,986	14,853	12,674	12,064	11,832				
Dry edible beans (1,000 cwt)	20,552	26,729	32,751	25,563	15,520	21,070	22,175	22,886	25,909	19,230				
	1988						1989							
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	
Shipments														
Fresh (1,000 cwt) 4/	16,475	20,999	16,535	18,041	18,754	24,944	20,887	35,676	31,223	21,599	21,914	15,030	16,605	
Potatoes (1,000 cwt)	9,958	13,948	11,092	11,137	10,497	14,733	13,005	15,768	9,991	8,466	10,678	9,005	9,612	
Sweetpotatoes (1,000 cwt)	305	876	460	246	278	441	229	190	20	19	187	288	333	

1/ 1983 data are not comparable with 1984 & 1985. 2/ Estimate reinstated for asparagus with the 1984 crop; all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop; all other years also include snap beans, sweet corn, green peas, & tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. -- = not available.

Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual					1988		1989		
	1984	1985	1986	1987	1988	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept
Sugar										
Production 1/	5,890	5,969	6,257	7,309	7,087	642	3,573	1,835	677	617
Deliveries 1/	8,454	8,035	7,786	8,167	8,188	2,147	2,107	1,902	2,056	2,161
Stocks, ending 1/	3,005	3,126	3,225	3,195	3,134	1,316	3,134	3,413	2,351	1,224
Coffee										
Composite green price N.Y. (cts./lb.)	142.95	137.46	185.18	109.14	115.59	114.20	120.75	126.67	118.01	72.29
Imports, green bean equiv. (mil. lbs.) 2/	2,411	2,550	2,596	2,638	2,072	594	472	586	535	784
<hr/>										
	Annual			1988		1989				
	1986	1987	1988	Aug	Sept	Apr	May	June	July	Aug
Tobacco										
Prices at auctions 3/										
Flue-cured (\$/lb.)	1.52	1.59	1.61	--	--	--	--	--	--	--
Burley (\$/lb.)	1.60	1.56	1.61	--	--	--	--	--	--	--
Domestic consumption 4/										
Cigarettes (bil.)	584.0	575.0	562.5	34.4	51.9	44.4	52.9	51.5	26.8	47.2
Large cigars (mil.)	3,055	2,728	2,531	234.4	245.4	179.2	250.8	255.0	166.1	231.0

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. -- = not available.

Information contacts: sugar, Peter Buzzanell (202) 786-1888, coffee, Fred Gray (202) 786-1888, tobacco, Verner Grise (202) 786-1890.

Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89 P	1989/90 F
	Million units						
Wheat							
Area (hectares)	228.9	231.2	229.6	228.2	219.9	217.7	225.7
Production (metric tons)	489.3	511.9	500.1	530.7	501.7	500.8	532.3
Exports (metric tons) 1/	102.0	107.0	85.0	90.7	104.9	97.8	97.1
Consumption (metric tons) 2/	474.0	493.0	496.2	522.5	531.0	530.5	535.9
Ending stocks (metric tons) 3/	145.1	164.0	167.9	176.1	146.8	116.9	113.4
Coarse grains							
Area (hectares)	335.0	334.6	341.3	337.3	323.0	326.2	325.7
Production (metric tons)	688.1	815.8	843.3	835.4	791.6	728.8	806.9
Exports (metric tons) 1/	93.4	100.4	83.2	84.1	83.6	94.7	98.4
Consumption (metric tons) 2/	759.3	782.6	779.0	809.5	812.3	796.8	821.1
Ending stocks (metric tons) 3/	110.7	143.9	208.1	234.0	213.4	145.4	131.1
Rice, milled							
Area (hectares)	144.1	144.1	144.6	145.1	140.7	145.2	146.0
Production (metric tons)	307.9	318.8	318.8	318.3	312.9	328.7	334.5
Exports (metric tons) 4/	12.4	11.4	12.6	13.0	11.9	14.5	13.4
Consumption (metric tons) 2/	304.5	310.6	319.4	323.2	319.1	326.2	334.9
Ending stocks (metric tons) 3/	46.6	54.9	54.7	50.2	44.0	46.4	46.0
Total grains							
Area (hectares)	708.0	709.9	715.5	710.6	683.6	689.1	697.4
Production (metric tons)	1,485.3	1,646.5	1,662.2	1,684.4	1,606.2	1,558.1	1,673.7
Exports (metric tons) 1/	207.8	218.8	180.8	187.8	200.4	207.0	208.9
Consumption (metric tons) 2/	1,537.8	1,586.2	1,594.6	1,655.2	1,662.4	1,653.5	1,691.9
Ending stocks (metric tons) 3/	302.4	362.8	430.7	460.3	404.2	308.7	290.5
Oilseeds							
Crush (metric tons)	135.8	150.7	155.0	161.4	167.1	166.5	173.5
Production (metric tons)	165.0	191.1	196.1	194.2	208.3	202.7	214.3
Exports (metric tons)	33.0	33.1	34.5	37.7	39.6	31.5	33.8
Ending stocks (metric tons)	15.7	21.1	26.8	23.5	23.8	22.1	23.4
Meals							
Production (metric tons)	92.5	101.8	105.0	110.4	114.5	112.4	118.2
Exports (metric tons)	29.7	32.3	34.4	36.7	36.2	36.8	39.6
Oils							
Production (metric tons)	42.1	46.2	49.3	50.3	52.8	53.7	56.2
Exports (metric tons)	13.7	15.6	16.4	16.9	17.6	17.6	18.7
Cotton							
Area (hectares)	31.0	33.9	31.9	29.9	31.1	34.0	33.0
Production (bales)	65.6	88.2	79.6	70.4	81.0	84.3	80.6
Exports (bales)	19.2	20.2	20.2	26.0	23.1	25.9	25.3
Consumption (bales)	68.3	70.0	75.8	82.5	84.0	84.6	85.9
Ending stocks (bales)	24.0	42.4	47.2	34.7	31.2	30.8	25.1
	1984	1985	1986	1987	1988	1989 P	1990 F
Red meat							
Production (metric tons)	99.8	103.7	106.7	109.7	113.2	113.4	114.3
Consumption (metric tons)	97.8	101.6	105.4	107.9	111.3	111.6	112.6
Exports (metric tons) 1/	6.0	6.4	6.7	6.7	7.0	7.0	7.1
Poultry							
Production (metric tons)	25.2	26.2	27.4	29.2	30.2	31.2	32.5
Consumption (metric tons)	25.0	26.0	27.0	28.8	29.9	30.8	32.1
Exports (metric tons) 1/	1.3	1.2	1.3	1.5	1.7	1.7	1.8
Dairy							
Milk production (metric tons)	413.0	413.5	419.1	427.0	430.0	431.7	437.4

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes.  
3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1984 data correspond with 1983/84, etc. P = preliminary. F = forecast.

Information contacts: Crops, Frederic Surls (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1769.



## U.S. Agricultural Trade

**Table 27.—Prices of Principal U.S. Agricultural Trade Products**

	Annual			1988		1989				
	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct
<b>Export commodities</b>										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.19	3.11	3.97	4.42	4.82	4.62	4.57	4.49	4.47	4.50
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.27	1.95	2.73	3.08	3.02	2.91	2.74	2.58	2.62	2.73
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.16	1.88	2.52	2.76	2.84	2.67	2.60	2.54	2.63	2.60
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.45	5.55	7.81	8.10	7.61	7.48	7.26	6.28	6.13	5.95
Soybean oil, Decatur (cts./lb.)	16.36	15.85	23.52	23.13	22.23	20.78	19.87	17.86	18.59	18.73
Soybean meal, Decatur (\$/ton)	157.62	175.57	234.75	258.06	215.09	227.36	230.23	214.70	216.65	191.93
Cotton, 8-market avg. spot (cts./lb.)	53.47	64.35	57.25	52.20	63.70	64.18	67.39	69.99	68.46	69.70
Tobacco, avg. price at auction (cts./lb.)	153.96	144.32	147.93	158.47	160.43	160.43	160.31	158.59	165.83	162.96
Rice, f.o.b. mill, Houston (\$/cwt)	14.60	13.15	19.60	15.25	15.00	15.50	16.50	16.50	16.50	16.50
Inedible tallow, Chicago (cts./lb.)	9.03	13.79	16.64	15.02	14.70	15.10	14.48	13.52	14.13	15.25
<b>Import commodities</b>										
Coffee, N.Y. spot (\$/lb.)	2.01	1.09	1.21	1.13	1.36	1.21	.88	.78	.78	.71
Rubber, N.Y. spot (cts./lb.)	42.87	50.65	59.20	55.17	52.07	49.50	49.16	47.21	46.13	46.08
Cocoa beans, N.Y. (\$/lb.)	.88	.87	.69	.58	.54	.54	.58	.55	.49	.46

Information contact: Mary Teymourian (202) 786-1820.

**Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1</sup>**

	1988	1989										
	Dec	Jan	Feb	Mar	Apr	May P	June P	July P	Aug P	Sept P	Oct P	Nov P
	1985 = 100											
Total U.S. trade 2/	66.3	68.6	69.3	70.2	70.3	73.2	74.7	72.0	72.8	73.9	71.6	71.9
Agricultural trade												
U.S. markets	75.7	77.1	77.5	79.4	79.1	80.9	82.1	80.5	82.0	82.8	81.5	81.9
U.S. competitors	81.2	81.4	81.4	81.9	87.9	83.1	83.3	82.9	84.2	85.8	86.4	87.2
Wheat												
U.S. markets	89.1	90.8	91.2	93.7	92.6	93.6	93.7	93.1	96.8	98.2	98.3	99.4
U.S. competitors	75.3	75.4	75.4	76.5	76.7	78.3	79.0	77.6	77.4	77.8	76.7	76.7
Soybeans												
U.S. markets	67.1	69.1	69.6	70.3	70.3	72.6	74.2	72.1	72.6	73.4	71.5	71.7
U.S. competitors	74.3	71.9	70.3	72.6	71.9	71.2	70.1	72.7	76.2	80.2	85.1	87.6
Corn												
U.S. markets	67.2	68.3	68.6	70.6	70.1	72.0	73.6	72.1	73.8	74.6	73.2	73.8
U.S. competitors	73.6	73.9	73.4	73.9	74.1	76.0	76.7	75.1	75.5	76.2	74.9	75.1
Cotton												
U.S. markets	72.9	74.2	74.4	75.0	74.8	76.1	77.3	76.1	76.2	76.8	75.6	75.7
U.S. competitors	81.6	81.5	80.6	82.7	81.2	83.0	82.7	82.1	89.0	88.6	87.8	89.2

<sup>1/</sup> Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. <sup>2/</sup> Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 786-1706.

**Table 29.—Trade Balance**

	Fiscal year 1/									Sept
	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F	1989
	\$ million									
<b>Exports</b>										
Agricultural	39,097	34,769	38,027	31,201	26,312	27,876	35,379	39,651	38,000	3,011
Nonagricultural	176,308	159,373	170,014	179,236	179,291	202,911	258,593	302,507	--	26,274
Total 2/	215,405	194,142	208,041	210,437	205,603	230,787	293,972	342,158	--	29,285
<b>Imports</b>										
Agricultural	15,485	16,373	18,916	19,740	20,884	20,650	21,014	21,479	2,100	1,560
Nonagricultural	233,349	230,527	297,736	313,722	342,846	367,374	409,138	441,072	--	36,322
Total 3/	248,834	246,900	316,652	333,462	363,730	388,024	430,152	462,551	--	37,882
<b>Trade balance</b>										
Agricultural	23,612	18,396	19,111	11,461	5,428	7,226	14,365	18,172	17,000	1,451
Nonagricultural	-57,041	-71,154	-127,722	-134,486	-163,555	-164,463	-150,545	-138,565	--	-10,048
Total	-33,429	-52,758	-108,611	-123,025	-158,127	-157,237	-136,180	-120,393	--	8,597

<sup>1/</sup> Fiscal years begin October 1 & end September 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989.

<sup>2/</sup> Domestic exports including Department of Defense shipments (F.A.S. value). <sup>3/</sup> Imports for consumption (customs value). F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*				Sept 1988	Fiscal year*				Sept 1989
	1987	1988	1989	1990 F		1987	1988	1989 F	1990 F	
	1,000 units					\$ million				
EXPORTS										
Animals, live (no.) 1/	275	430	758	--	19	331	452	475	--	66
Meats & preps., excl. poultry (mt)	548	631	869	2/800	74	1,300	1,797	2,355	--	177
Dairy products (mt)	445	388	594	--	55	491	536	475	600	42
Poultry meats (mt)	376	390	466	500	36	406	424	514	--	38
Fats, oils, & greases (mt)	1,220	1,362	1,377	3/1,400	156	417	565	531	--	55
Hides & skins incl. furskins	--	--	--	--	--	1,666	1,837	1,713	--	127
Cattle hides, whole (no.) 1/	24,333	20,817	26,260	--	2,056	1,254	1,458	1,360	--	101
Mink pelts (no.) 1/	2,760	2,455	3,073	--	170	103	88	91	--	4
Grains & feeds (mt)	90,211	108,944	114,976	--	9,446	9,059	12,569	16,837	4/15,600	1,400
Wheat (mt)	28,204	40,517	37,702	33,000	4,061	2,877	4,469	6,006	5/5,400	653
Wheat flour (mt)	1,305	1,236	1,268	1,300	177	207	170	266	--	41
Rice (mt)	2,454	2,173	3,052	2,500	273	551	731	955	800	92
Feed grains, incl. products (mt)	47,606	53,117	61,094	63,500	4,058	3,752	5,193	7,379	6,700	444
Feeds & fodders (mt)	10,113	11,255	11,071	6/11,400	810	1,455	1,720	1,848	--	138
Other grain products (mt)	755	910	1,197	--	113	285	362	513	--	47
Fruits, nuts, and preps. (mt)	2,146	2,409	2,555	--	177	2,050	2,368	2,394	--	207
Fruit juices incl.										
froz. (1,000 hectoliters) 1/	4,364	5,497	4,997	--	424	185	252	264	--	23
Vegetables & preps. (mt)	1,629	1,821	2,482	--	188	1,176	1,280	1,546	--	118
Tobacco, unmanufactured (mt)	224	229	212	200	14	1,203	1,297	1,274	1,300	71
Cotton, excl. linters (mt)	1,306	1,388	1,441	1,700	107	1,419	2,136	2,039	2,700	169
Seeds (mt)	305	286	514	--	72	371	415	500	500	43
Sugar, cane or beet (mt)	582	318	368	--	51	113	98	134	--	20
Oilseeds & products (mt)	29,725	29,688	21,090	--	905	6,308	7,758	6,624	5,600	290
Oilseeds (mt)	21,905	21,601	14,775	--	522	4,423	5,295	4,400	--	139
Soybeans (mt)	21,394	21,142	14,088	15,600	486	4,205	5,066	4,079	3,400	119
Protein meal (mt)	6,786	6,389	4,816	4,600	179	1,347	1,501	1,317	900	39
Vegetable oils (mt)	1,035	1,699	1,498	--	204	538	962	908	--	112
Essential oils (mt)	8	9	13	--	1	111	120	171	--	14
Other	565	610	612	--	53	1,273	1,495	1,805	--	150
Total	129,290	148,473	147,569	145,500	11,335	27,876	35,379	39,651	38,000	3,011
IMPORTS										
Animals, live (no.) 1/	1,994	2,238	2,484	--	157	610	729	740	700	47
Meats & preps., excl. poultry (mt)	1,282	1,280	1,092	--	75	2,797	2,788	2,433	--	178
Beef & veal (mt)	778	779	668	685	47	1,575	1,681	1,527	1,600	112
Pork (mt)	462	456	371	370	24	1,125	1,001	778	800	56
Dairy products (mt)	461	232	211	300	16	849	881	834	800	73
Poultry & products 1/	--	--	--	--	--	112	97	130	--	13
Fats, oil, & greases (mt)	21	20	14	--	1	18	19	14	--	1
Hides & skins, incl. furskins 1/	--	--	--	--	--	304	247	240	--	16
Wool, unmanufactured (mt)	60	56	62	--	2	201	292	319	--	10
Grains & feeds (mt)	2,336	3,075	3,468	3,200	279	727	868	1,139	1,100	98
Fruits, nuts, & preps., excl. juices (mt)	4,840	4,797	5,036	4,915	309	2,178	2,169	2,269	--	149
Bananas & plantains (mt)	3,106	3,030	3,039	3,050	227	817	820	851	800	65
Fruit juices (1,000 hectoliters) 1/	34,059	26,758	27,778	27,000	1,562	728	768	793	--	42
Vegetables & preps. (mt)	2,446	2,518	2,953	2,700	184	1,509	1,593	1,959	1,900	116
Tobacco, unmanufactured (mt)	225	217	169	280	12	634	611	521	500	36
Cotton, unmanufactured (mt)	38	36	13	--	1	7	9	8	--	1
Seeds (mt)	133	143	158	160	4	156	153	187	200	13
Nursery stock & cut flowers 1/	--	--	--	--	--	369	419	466	--	50
Sugar, cane or beet (mt)	1,492	1,078	1,630	--	106	497	372	620	--	35
Oilseeds & products (mt)	1,572	1,772	1,917	1,900	141	579	838	946	900	65
Oilseeds (mt)	165	208	424	--	37	56	71	159	--	13
Protein meal (mt)	245	253	359	--	32	30	42	65	--	5
Vegetable oils (mt)	1,162	1,311	1,133	--	73	493	725	721	--	47
Beverages excl. fruit										
juices (1,000 hectoliters) 1/	15,547	15,583	13,967	--	1,058	1,923	2,008	1,815	--	149
Coffee, tea, cocoa, spices (mt)	1,915	1,841	1,868	--	179	4,867	4,274	3,896	--	317
Coffee, incl. products (mt)	1,206	1,050	1,084	1,200	121	3,233	2,600	2,467	2,300	212
Cocoa beans & products (mt)	503	562	564	550	41	1,088	1,164	969	900	73
Rubber & allied gums (mt)	824	846	927	850	71	714	949	1,051	1,000	63
Other	--	--	--	--	--	871	931	1,097	--	88
Total	--	--	--	--	--	20,650	21,014	21,479	21,000	1,560

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/ 6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m. tons. 3/ 1.347 million dollars 4/ 12,743 million. 5/ 4,638 million, i.e. includes flour. 6/ 11.095 million m. tons. F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*				Sept	Change from year* earlier				Sept
	1987	1988	1989	1990 F	1989	1987	1988	1989	1990 F	1989
	\$ million					Percent				
Western Europe	7,219	8,053	7,067	6,600	433	5	12	-12	-7	-18
European Community (EC-12)	6,787	7,536	6,558	6,100	382	5	11	-13	-8	-21
Belgium-Luxembourg	423	429	431	--	31	17	1	1	--	5
France	495	563	474	--	29	15	14	-16	--	-17
Germany, Fed. Rep.	1,266	1,315	918	--	52	26	4	-30	--	-42
Italy	733	713	603	--	35	6	-3	-16	--	-15
Netherlands	1,954	2,103	1,847	--	81	-4	8	-12	--	-14
United Kingdom	666	818	736	--	73	6	23	-10	--	-4
Portugal	271	340	307	--	4	-12	25	-10	--	-80
Spain, incl. Canary Islands	658	848	876	--	22	-9	29	3	--	-68
Other Western Europe	432	516	510	500	51	4	20	-1	0	15
Switzerland	145	191	166	--	12	13	32	-13	--	4
Eastern Europe	453	559	422	500	18	1	23	-24	-25	-40
German Dem. Rep.	66	67	72	--	5	27	0	8	--	-78
Poland	63	167	45	--	2	50	165	-73	--	-59
Yugoslavia	131	104	76	--	3	-2	-21	-26	--	155
Romania	115	93	62	--	7	3	-19	-33	--	238
USSR	659	1,940	3,299	3,200	18	-40	194	70	-3	-79
Asia	11,990	15,944	18,685	18,200	1,543	14	33	17	-3	1
West Asia (Mideast)	1,664	1,904	2,270	2,200	257	34	14	19	-4	31
Turkey	117	120	238	--	28	5	3	97	--	210
Iraq	528	735	791	900	80	58	39	8	12	-11
Israel	244	334	265	--	1	-4	37	-21	--	-96
Saudi Arabia	489	464	482	500	51	46	-5	4	0	-12
South Asia	345	805	1,171	--	120	-33	133	45	--	-14
Bangladesh	111	107	213	--	22	18	-3	98	--	-42
India	93	354	243	--	7	3	281	-31	--	-90
Pakistan	98	276	609	400	78	-66	181	121	67	227
China	235	613	1,494	1,200	138	183	161	144	-20	53
Japan	5,554	7,274	8,152	8,200	581	31	12	12	0	-7
Southeast Asia	708	1,022	974	--	98	-2	44	-5	--	36
Indonesia	152	245	216	--	19	-12	61	-12	--	25
Philippines	259	345	344	400	43	-4	33	0	33	28
Other East Asia	3,485	4,326	4,623	4,500	348	25	24	7	-2	-15
Taiwan	1,354	1,577	1,594	1,600	149	22	16	1	-6	-14
Korea, Rep.	1,693	2,259	2,453	2,500	151	33	33	9	0	-20
Hong Kong	436	488	575	600	49	9	12	18	0	3
Africa	1,784	2,272	2,281	2,300	318	-16	27	0	0	30
North Africa	1,279	1,659	1,798	1,800	241	-9	30	8	0	48
Morocco	196	193	216	--	37	23	-2	12	--	29
Algeria	244	537	549	600	66	-26	120	2	20	88
Egypt	761	786	955	900	131	-13	3	21	-10	47
Sub-Sahara	505	613	483	500	77	-31	21	-21	0	-7
Nigeria	67	44	30	--	2	-58	-35	-31	--	-66
Rep. S. Africa	49	85	57	--	7	-30	74	-34	--	-28
Latin America & Caribbean	3,765	4,401	5,442	5,100	467	5	17	24	-6	-18
Brazil	418	176	152	600	27	-6	-58	-13	0	649
Caribbean Islands	829	867	1,007	--	70	10	5	16	--	-10
Central America	377	414	448	--	48	13	10	8	--	-11
Colombia	115	178	139	--	10	-16	55	-22	--	-26
Mexico	1,215	1,726	2,757	2,400	256	9	42	60	-14	-10
Peru	140	174	81	--	3	30	24	-54	--	-89
Venezuela	459	597	587	600	27	-7	30	-2	-17	-66
Canada	1,776	1,973	2,187	2,200	194	21	11	11	0	161
Oceania	230	237	268	300	21	6	3	13	0	1
Total	27,876	35,379	39,651	36,000	3,011	6	27	12	-4	-5
Developed countries	15,031	17,905	18,000	17,500	1,268	8	19	1	-3	-7
Less developed countries	11,498	14,362	16,436	15,600	1,570	7	25	14	-5	-2
Centrally planned countries	1,347	3,111	5,215	4,900	173	-18	131	68	-6	-16

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. F = forecast.

-- = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 786-1822.



Table 32.—Farm Income Statistics

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
1. Farm receipts	142.0	144.1	147.1	141.1	146.8	149.1	140.6	145.3	157.2	164	165 to 170
Crops (incl. net CCC loans)	71.7	72.5	72.3	67.1	69.5	74.3	64.0	63.8	72.6	75	77 to 80
Livestock	68.0	69.2	70.3	69.4	73.0	69.8	71.5	75.7	78.9	83	80 to 83
Farm related 1/	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.8	5.7	6	5 to 7
2. Direct Government payments	1.3	1.9	3.5	9.3	8.4	7.7	11.8	16.7	14.5	11	8 to 11
Cash payments	1.3	1.9	3.5	4.1	4.0	7.6	8.1	6.6	7.1	10	7 to 9
Value of PIK commodities	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.4	1	1 to 2
3. Total gross farm income (4+5+6) 2/	149.3	166.4	163.5	153.1	174.9	166.4	160.4	171.6	177.6	190	185 to 190
4. Gross cash income (4+2)	143.3	146.0	150.6	150.4	155.2	156.9	152.5	162.0	171.6	174	173 to 178
5. Nonmoney income 3/	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	10.3	10	9 to 11
6. Value of inventory change	-6.3	6.5	-1.4	-10.9	6.3	-2.4	-2.7	-4	-4.3	5	1 to 3
7. Cash expenses 4/	109.1	113.2	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	119 to 122
8. Total expenses	133.1	139.4	140.0	140.4	142.7	134.0	122.4	128.0	135.0	141	139 to 142
9. Net cash income (4-7)	34.2	32.8	37.8	36.9	38.6	46.7	51.8	54.5	57.2	53	52 to 57
10. Net farm income (3-8)	16.1	26.9	23.5	12.7	32.2	32.4	38.0	43.6	42.7	48	44 to 49
Deflated (1982\$)	18.8	28.6	23.5	12.2	29.9	29.2	33.4	37.2	35.2	38	34 to 38
11. Off-farm income	34.7	35.8	36.4	37.0	38.9	42.6	44.6	46.8	51.7	54	55 to 59
12. Loan changes 5/:											
5/: Real estate	9.9	9.1	3.8	2.3	-1.1	-6.0	-9.0	-7.5	-4.4	-2	0 to 3
5/: Non-real estate	5.3	6.5	3.4	0.9	-0.8	-9.6	-11.0	-4.6	-0.3	0	-1 to 1
14. Rental income plus monetary change	6.1	6.4	6.3	5.3	8.9	8.8	7.8	6.8	8.5	8	7 to 9
15. Capital expenditures 5/	18.0	16.8	13.3	12.7	12.5	9.2	8.5	9.8	10.2	11	11 to 13
16. Net cash flow (9+12+13+14-15)	37.6	37.8	38.1	32.7	33.1	30.7	31.2	39.4	50.8	48	50 to 58

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast. 1987 and 1988 expenses include preliminary revisions from the 1987 Census of Agriculture.

Information contact: Diane Bertelsen (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/ 2/										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
Assets											
Real estate	782.4	784.7	748.8	738.7	637.7	555.9	507.3	577.0	607.9	648	675 to 685
Non-real estate	213.2	212.0	212.2	205.6	209.0	190.5	182.2	187.8	202.5	201	200 to 210
Livestock & poultry	60.6	53.5	53.0	49.7	49.6	46.3	47.6	57.9	65.7	67	66 to 70
Machinery & motor vehicles	93.1	101.4	102.0	100.8	96.9	87.6	80.3	73.9	74.7	76	75 to 79
Crops stored 3/	33.0	29.1	27.7	23.9	29.7	23.6	19.1	20.9	26.2	22	19 to 23
Financial assets	26.5	28.0	29.5	31.3	32.8	33.0	35.2	35.2	35.9	36	36 to 38
Total farm assets	995.6	996.7	961.0	944.3	846.7	746.4	689.5	764.9	810.4	849	880 to 890
Liabilities											
Real estate debt 4/	89.6	98.7	102.5	104.8	103.6	97.6	88.6	81.1	76.7	75	73 to 77
Non-real estate debt 5/	77.1	83.6	87.0	87.9	87.1	77.5	66.6	62.0	61.7	61	60 to 64
Total farm debt	166.8	182.3	189.5	192.7	190.7	175.1	155.1	143.1	138.4	136	134 to 140
Total farm equity	828.9	814.4	771.5	751.6	656.0	571.3	534.4	621.8	672.0	713	740 to 750
	Percent										
Selected ratios											
Debt-to-assets	16.8	18.3	19.7	20.4	22.5	23.5	22.5	18.7	17.1	16	15 to 16
Debt-to-equity	20.1	22.4	24.6	25.6	29.1	30.6	29.0	23.0	20.6	19	18 to 19
Debt-to-net cash income 488	488	556	497	523	493	375	299	248	231	256	240 to 250

1/ As of Dec. 31. 2/ Estimates of farm assets and equity for 1987-1990 reflect revisions in real estate assets based on the 1987 Census of Agriculture. Revisions in real estate assets for 1983-1986 have not been completed. 3/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 4/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 5/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

**Table 34.—Cash Receipts from Farm Marketings, by State**

Region & State	Livestock & products				Crops 1/				Total 1/			
	1987	1988	Aug 1989	Sept 1989	1987	1988	Aug 1989	Sept 1989	1987	1988	Aug 1989	Sept 1989
\$ million 2/												
North Atlantic												
Maine	228	216	18	18	184	188	17	20	412	404	35	37
New Hampshire	67	60	5	5	72	77	8	13	139	137	13	17
Vermont	377	352	31	32	45	53	2	5	422	405	33	36
Massachusetts	121	105	9	8	259	297	26	47	379	402	34	55
Rhode Island	13	13	1	1	64	65	2	21	77	78	3	22
Connecticut	191	180	15	15	194	202	13	25	385	382	28	40
New York	1,809	1,781	158	164	800	824	96	103	2,610	2,605	254	267
New Jersey	195	192	16	15	438	450	46	40	633	642	63	55
Pennsylvania	2,310	2,348	203	207	904	935	76	89	3,213	3,284	279	296
North Central												
Ohio	1,616	1,604	135	139	1,862	2,025	111	294	3,478	3,629	246	433
Indiana	1,874	1,749	149	148	1,832	2,367	134	415	3,706	4,117	283	563
Illinois	2,249	2,243	181	189	3,850	4,218	172	594	6,099	6,461	353	784
Michigan	1,282	1,206	103	103	1,311	1,464	104	121	2,594	2,670	206	223
Wisconsin	4,216	4,281	369	374	799	767	84	96	5,015	5,048	459	470
Minnesota	3,561	3,364	298	297	2,270	2,743	205	244	5,831	6,107	503	541
Iowa	5,202	5,045	392	385	3,563	4,029	215	389	8,765	9,074	608	774
Missouri	2,102	2,011	171	169	1,586	1,814	71	194	3,687	3,826	242	363
North Dakota	762	849	68	82	1,601	1,574	156	140	2,363	2,423	225	222
South Dakota	1,907	1,965	161	193	820	945	81	104	2,726	2,911	243	296
Nebraska	4,857	5,336	449	446	1,967	2,643	155	161	6,824	7,979	604	607
Kansas	3,919	4,265	375	332	1,963	2,329	147	175	5,882	6,594	521	507
Southern												
Delaware	370	444	36	40	116	149	20	18	487	592	56	58
Maryland	734	768	63	71	405	459	27	54	1,140	1,226	90	125
Virginia	1,275	1,294	101	131	484	592	49	80	1,759	1,886	150	211
West Virginia	174	179	15	17	60	70	8	14	234	248	23	32
North Carolina	2,111	2,179	187	199	1,658	1,994	376	497	3,768	4,173	563	697
South Carolina	450	488	41	45	479	590	81	86	929	1,078	122	131
Georgia	1,825	2,011	139	189	1,299	1,553	130	244	3,124	3,544	269	433
Florida	1,086	1,114	118	99	4,368	4,697	153	142	5,454	5,811	273	241
Kentucky	1,507	1,538	84	146	940	992	23	70	2,448	2,530	106	216
Tennessee	1,110	1,080	83	100	874	965	34	61	1,984	2,046	118	161
Alabama	1,521	1,695	151	158	633	706	23	90	2,154	2,400	173	248
Mississippi	1,042	1,176	107	118	945	1,164	20	96	1,987	2,341	127	214
Arkansas	2,083	2,278	204	223	1,112	1,696	52	252	3,195	3,974	255	475
Louisiana	511	587	57	51	965	1,299	47	122	1,476	1,885	104	173
Oklahoma	2,066	2,284	199	225	811	1,127	128	64	2,877	3,410	327	289
Texas	6,092	6,498	630	659	2,907	3,783	285	400	8,998	10,281	915	1,060
Western												
Montana	747	816	53	111	608	570	82	77	1,355	1,386	135	188
Idaho	924	1,033	95	96	1,164	1,258	194	194	2,089	2,291	289	290
Wyoming	528	575	31	76	127	156	18	12	655	730	49	88
Colorado	2,323	2,655	221	249	885	1,037	95	88	3,207	3,692	317	337
New Mexico	817	910	54	64	351	362	44	37	1,168	1,272	98	100
Arizona	773	793	52	42	987	1,167	28	66	1,760	1,959	80	108
Utah	466	537	44	57	134	150	14	17	600	687	57	74
Nevada	164	150	14	11	69	79	9	7	232	229	24	18
Washington	981	1,141	103	105	1,880	2,146	266	296	2,862	3,287	369	400
Oregon	655	669	70	66	1,236	1,427	167	224	1,890	2,096	238	290
California	4,426	4,704	466	433	11,382	11,894	793	1,149	15,808	16,598	1,262	1,582
Alaska	11	10	1	1	19	20	2	2	30	30	3	3
Hawaii	88	89	7	7	473	479	41	40	560	568	48	47
United States	75,717	78,862	6,740	7,109	63,751	72,569	5,131	7,788	139,468	151,431	11,871	14,897

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts from Farming.

	Annual						1988	1989				
	1983	1984	1985	1986	1987	1988	Sept	May	June	July	Aug	Sept
	\$ million											
Farm marketings & CCC loans*	136,567	142,439	144,135	135,539	139,468	151,431	14,229	11,435	12,006	11,772	11,871	14,897
Livestock & products	69,438	72,968	69,845	71,534	75,717	78,862	6,973	6,906	6,559	6,479	6,740	7,109
Meat animals	38,893	40,832	38,589	39,122	44,276	45,975	4,027	3,802	3,545	3,281	3,859	4,075
Dairy products	18,763	17,944	18,063	17,753	17,710	17,668	1,435	1,612	1,508	1,537	1,569	1,566
Poultry & eggs	9,981	12,223	11,211	12,661	11,480	12,864	1,302	1,330	1,336	1,277	1,252	1,259
Other	1,801	1,969	1,982	1,997	2,252	2,354	210	161	170	383	161	209
Crops	67,129	69,471	74,290	64,005	63,751	72,569	7,256	4,529	5,448	5,293	5,131	7,788
Food grains	9,713	9,740	8,993	5,638	5,581	7,700	711	434	1,368	1,315	976	858
Feed crops	15,535	15,668	22,520	17,161	13,102	15,291	1,426	1,014	1,430	1,255	1,155	1,615
Cotton (lint & seed)	3,705	3,674	3,687	3,605	4,087	4,668	275	87	83	109	91	524
Tobacco	2,752	2,813	2,722	1,918	1,827	2,039	503			19	510	527
Oil-bearing crops	13,546	13,641	12,474	10,571	11,159	13,699	1,558	546	488	374	297	1,509
Vegetables & melons	8,459	9,138	8,558	8,826	9,718	9,819	924	1,062	812	667	877	927
Fruits & tree nuts	6,056	6,733	6,957	7,246	8,257	8,877	940	518	686	938	616	908
Other	7,365	8,065	8,381	9,041	10,020	10,476	920	868	580	617	609	921
Government payments	9,295	8,430	7,704	11,813	16,747	14,480	419	816	235	204	93	179
Total	145,862	150,869	151,839	147,352	156,215	165,911	14,648	12,251	12,241	11,976	11,964	15,076

\*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ million										
Feed	20,971	20,855	18,592	21,725	19,852	18,015	16,179	18,898	22,462	24,000	18,000 to 22,000
Livestock	10,670	8,999	9,684	8,814	9,498	8,958	9,744	11,845	12,812	13,000	12,000 to 15,000
Seed	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,009	3,138	4,000	3,000 to 5,000
Farm-origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,907	33,752	38,412	41,000	36,000 to 40,000
Fertilizer	9,491	9,409	8,018	7,067	7,429	7,258	5,787	6,210	7,000	8,000	7,000 to 9,000
Fuels & oils	7,879	8,570	7,888	7,503	7,143	6,584	4,790	5,042	5,144	6,000	5,000 to 7,000
Electricity	1,526	1,747	2,041	2,146	2,166	2,150	1,942	2,393	2,572	3,000	2,000 to 3,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,484	4,588	4,716	5,000	5,000 to 6,000
Manufactured inputs	22,435	23,927	22,229	20,870	21,505	20,986	17,003	18,233	19,432	22,000	21,000 to 25,000
Short-term interest	8,717	10,722	11,349	10,615	10,396	8,821	7,795	7,305	7,287	8,000	7,000 to 9,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,187	7,885	7,000	6,000 to 8,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,492	15,172	15,000	14,000 to 16,000
Repair & maintenance 1/ 2/	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,546	6,858	7,000	7,000 to 8,000
Contract & hired labor	9,293	8,931	10,075	9,725	9,729	9,799	9,890	10,821	11,202	11,000	11,000 to 12,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,171	2,000	2,000 to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,823	3,279	4,000	4,000 to 5,000
Misc. operating expenses 1/	6,881	6,909	7,262	9,089	9,106	8,232	7,993	8,306	8,809	9,000	8,000 to 10,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,771	31,452	32,319	34,000	33,000 to 37,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	18,918	17,664	17,722	18,000	17,000 to 19,000
Taxes 1/	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,345	4,378	4,000	4,000 to 5,000
Net rent to nonoperator landlord	6,075	6,184	6,059	5,060	8,640	8,158	6,737	7,060	7,527	8,000	8,000 to 9,000
Other overhead expenses	31,440	34,003	34,381	33,402	35,804	33,236	29,780	29,069	29,627	30,000	30,000 to 33,000
Total production expenses	133,139	139,444	139,980	140,377	142,669	133,956	122,387	127,998	134,963	141,000	139,000 to 142,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases &amp; dairy assessments. Totals may not add because of rounding. F = forecast. 1987 and 1988 expenses include preliminary revisions from the Census of Agriculture.

Information contacts: Chris McGath (202) 786-1804, Diane Bertelsen (202) 786-1808.



Table 37.—CCC Net Outlays by Commodity &amp; Function

COMMODITY/PROGRAM	Fiscal year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 E	1990 E
	\$ million										
Feed grains	1,286	-533	5,397	6,815	-758	5,211	12,211	13,967	9,053	4,169	7,067
Wheat	879	1,543	2,238	3,419	2,536	4,691	3,440	2,836	678	84	197
Rice	-76	24	164	664	333	990	947	906	128	692	561
Upland cotton	64	336	1,190	1,363	244	1,553	2,142	1,786	666	1,723	298
Tobacco	-88	-51	103	880	346	455	253	-346	-453	-481	-201
Dairy	1,011	1,894	2,182	2,528	1,502	2,085	2,337	1,166	1,295	658	686
Soybeans	116	87	169	288	-585	711	1,597	-476	-1,676	-19	168
Peanuts	28	28	12	-6	1	12	32	8	7	6	4
Sugar	-405	-121	-5	49	10	184	214	-65	-246	0	0
Honey	9	8	27	48	90	81	89	73	100	66	56
Wool	35	42	54	94	132	109	123	152	1/ 5	95	110
Operating expense 2/	157	159	294	328	362	346	457	535	614	623	635
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	206	347
Export programs 3/	-669	-940	65	398	743	134	102	276	200	122	106
Other	-113	1,340	-225	-1,542	1,295	-314	486	371	1,695	5,540	1,314
<b>Total</b>	<b>2,752</b>	<b>4,036</b>	<b>11,652</b>	<b>18,851</b>	<b>7,315</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>12,461</b>	<b>13,484</b>	<b>11,348</b>
<b>FUNCTION</b>											
Price-support loans (net)	-66	174	7,015	8,438	-27	6,272	13,628	12,199	4,579	-138	1,500
Direct payments											
Deficiency	79	0	1,185	2,780	612	6,302	6,166	4,833	3,971	5,559	6,024
Diversion	56	0	0	705	1,504	1,525	64	382	8	-1	0
Dairy termination	0	0	0	0	0	0	489	587	260	110	211
Other	25	0	0	0	0	0	27	60	0	45	0
Disaster	258	1,030	306	115	1	0	0	0	6	0	0
Total direct payments	418	1,030	1,491	3,600	2,117	7,827	6,746	5,862	4,245	5,713	6,235
1988 crop disaster	0	0	0	0	0	0	0	0	0	3,750	0
Emergency livestock/											
forage assistance	23	329	16	0	0	0	0	0	31	608	201
Purchases (net)	1,681	1,602	2,031	2,540	1,470	1,331	1,670	-479	-1,131	390	60
Producer storage											
payments	254	32	679	964	268	329	485	832	658	343	141
Processing, storage,											
& transportation	259	323	355	665	639	657	1,013	1,659	1,113	602	780
Operating expense 2/	157	159	294	328	362	346	457	535	614	623	635
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	206	347
Export programs 3/	-669	-940	65	398	743	134	102	276	200	122	106
Other	177	1,107	-281	-1,607	679	-648	329	305	1,757	1,265	1,343
<b>Total</b>	<b>2,752</b>	<b>4,036</b>	<b>11,652</b>	<b>18,851</b>	<b>7,315</b>	<b>17,683</b>	<b>25,841</b>	<b>22,408</b>	<b>12,461</b>	<b>13,484</b>	<b>11,348</b>

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Does not include CCC transfers to general sales manager. 3/ Includes export guarantee program, direct export credit program, and CCC transfers to the general sales manager. E = Estimated in the fiscal 1990 mid-session review. Fiscal 1990 estimated outlays do not incorporate the impact of the Drought Assistance Act of 1989. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 447-5148.

## Food Expenditures

Table 38.—Food Expenditure Estimates

	Annual			1989			1989 year-to-date		
	1986 R	1987 R	1988 R	Aug P	Sept P	Oct P	Aug	Sept P	Oct P
	\$ billion								
Sales 1/									
Off-premise use 2/	237.1	245.5	257.8	23.8	23.4	23.1	181.2	204.6	227.7
Meals and snacks 3/	158.5	174.8	187.4	17.7	16.7	16.8	130.5	147.2	164.0
	1988 \$ billion								
Sales 1/									
Off-premise use 2/	257.7	255.9	257.8	22.2	21.8	21.5	171.0	192.8	214.3
Meals and snacks 3/	171.6	181.9	187.4	16.8	15.8	15.8	125.6	141.5	157.3
	Percent change from year earlier (\$ bil.)								
Sales 1/									
Off-premise use 2/	3.3	3.6	5.0	7.6	8.1	6.6	7.3	7.4	7.3
Meals and snacks 3/	6.9	10.2	7.2	3.9	4.6	3.0	5.8	5.7	5.4
	Percent change from year earlier (1988 \$ bil.)								
Sales 1/									
Off-premise use 2/	2.4	-7	-7	-1.8	2.9	-1.2	2.2	-5	-6
Meals and snacks 3/	2.9	6.0	3.0	-1.0	-1	-1.6	1.2	1.0	.8

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations and home production. 3/ Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates. R = revised. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, not alcoholic beverages and pet food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced and consumed on farms and food furnished to employees; (4) this series includes all sales of meats and snacks. PCE includes only purchases using personal funds, excluding business travel and entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug. 1987.

Information contact: Alden Manchester (202) 786-1880.

## Transportation

Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments

	Annual			1988			1989			
	1986	1987	1988	Oct	May	June	July	Aug	Sept	Oct
Rail freight rate index 1/ (Dec. 1984=100)										
All products	100.7	100.1	104.8	105.4	106.0	106.3	106.6 P	107.1 P	106.7 P	106.7 P
Farm products	99.6	99.3	105.6	107.9	108.6	107.9	108.3 P	108.2 P	108.2 P	108.2 P
Grain	98.9	98.7	105.4	108.3	108.8	108.0	108.5 P	108.4 P	108.4 P	108.4 P
Food products	99.9	98.6	103.2	103.7	103.5	103.7	104.0 P	104.3 P	104.1 P	104.1 P
Grain shipments										
Rail carloadings (1,000 cars) 2/	24.4	29.0	30.7	30.6 P	25.9 P	27.3 P	25.0 P	25.9 P	24.4 P	28.9 P
Fresh fruit & vegetable shipments										
Piggy back (1,000 cwt) 3/ 4/	629	588	532	408	763	709	603	454	462	406
Rail (1,000 cwt) 3/ 4/	563	630	609	588	683	900	521	215	415	472
Truck (1,000 cwt) 3/ 4/	9,031	9,137	9,689	8,730	11,301	12,277	9,762	8,863	8,281	9,040
Cost of operating trucks										
hauling produce 5/										
Owner operator (cts./mile)	113.1	116.3	118.7	118.6	123.5	123.4	123.4	123.4	124.3	125.5
Fleet operation (cts./mile)	113.6	116.5	118.4	118.3	122.6	122.7	122.9	122.6	123.4	124.5

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1988 & 1989. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.O. Hutchinson (202) 786-1840.

# Indicators of Farm Productivity

**Table 40.—Indexes of Farm Production, Input Use, & Productivity<sup>1</sup>**

	1980	1981	1982	1983	1984	1985	1986	1987	1988 2/	1989 2/
	1977=100									
Farm output	104	118	116	96	112	118	111	110	101	109
All livestock products 3/	108	109	107	109	107	110	110	113	115	116
Meat animals	107	106	101	104	101	102	100	102	104	104
Dairy products	105	108	110	114	110	117	116	116	116	118
Poultry & eggs	115	119	119	120	123	128	133	144	150	153
All crops 4/	101	117	117	88	111	118	109	108	92	103
Feed grains	97	121	122	67	116	134	123	105	73	106
Hay & forage	98	106	109	100	107	106	106	103	90	99
Food grains	121	144	138	117	129	121	106	107	98	108
Sugar crops	97	107	96	93	95	97	106	112	107	110
Cotton	79	109	85	55	91	94	69	103	108	85
Tobacco	93	108	104	75	90	81	63	62	71	78
Oil crops	99	114	121	91	106	117	110	107	88	105
Cropland used for crops	101	102	101	88	99	98	94	88	87	--
Crop production per acre	100	115	116	100	112	120	116	122	106	--
Farm input 5/	103	102	99	97	95	92	87	86	85	--
Farm real estate	103	104	102	101	97	95	93	92	91	--
Mechanical power & machinery	101	98	92	88	84	80	75	72	71	--
Agricultural chemicals	123	129	118	105	121	123	110	111	113	--
Feed, seed, & livestock purchases	114	108	108	110	106	106	103	111	107	--
Farm output per unit of input	101	116	117	99	119	128	127	128	120	--
Output per hour of labor										
Farm 6/	109	123	125	99	121	139	139	142	134	--
Nonfarm 7/	99	100	99	102	105	106	108	109	111	--

1/ For historical data & indexes, see Economic Indicators of the Farm Sector: Production & Efficiency Statistics, 1986, ECIFS 5-6. 2/ Preliminary indexes for 1988 based on Crop Production: 1988 Summary, released in January 1989, & unpublished data from the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics. -- = not available.

Information contact: Jim Hauver (202) 786-1459.



Table 41.—Per Capita Consumption of Major Food Commodities<sup>1</sup>

	1981	1982	1983	1984	1985	1986	1987	1988 2/
	Pounds							
Meats (boneless, trimmed weight) 3/	121.9	116.7	120.3	119.9	120.9	118.3	113.3	115.1
Beef	72.7	72.4	73.8	73.6	74.3	74.1	69.2	68.2
Veal	1.3	1.4	1.4	1.5	1.5	1.6	1.3	1.1
Lamb & mutton	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.0
Pork	46.8	41.9	44.0	43.7	44.1	41.6	41.8	44.7
Fish (edible weight)	12.9	12.3	13.1	13.7	14.4	14.7	15.4	15.0
Canned	4.8	4.3	4.8	4.9	5.1	5.4	5.1	5.1
Fresh & frozen	7.8	7.7	8.0	8.3	9.0	9.0	10.0	9.6
Cured	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Poultry (boneless weight)	44.0	45.0	45.9	47.2	49.4	51.1	55.3	57.2
Chicken	35.5	36.5	37.0	38.2	39.8	40.6	43.4	44.6
Turkey	8.5	8.5	8.9	9.0	9.5	10.5	11.9	12.6
Eggs	33.5	33.5	33.0	32.9	32.2	31.7	31.6	30.9
Dairy products								
Cheese (excluding cottage)	18.2	19.9	20.5	21.4	22.5	23.0	24.0	23.6
Cottage cheese	4.3	4.2	4.1	4.1	4.1	4.1	3.9	3.9
Fluid whole milk 4/	139.6	133.2	130.0	126.5	122.9	116.0	111.4	106.1
Fluid lowfat milk 5/	82.2	83.0	85.4	88.6	93.4	98.2	100.1	101.6
Fluid skim milk	11.3	10.6	10.6	11.5	12.6	13.4	14.0	16.2
Fluid cream 6/	3.4	3.4	3.7	4.0	4.4	4.7	4.6	4.7
Yogurt	2.5	2.6	3.2	3.7	4.1	4.4	4.5	4.6
Ice cream (product weight)	17.4	17.6	18.0	18.1	18.1	18.4	18.3	17.2
Ice milk	7.0	6.6	6.9	7.0	6.9	7.2	7.4	7.9
Fats & oils								
Butter	4.2	4.3	4.9	4.9	4.9	4.6	4.6	4.5
Margarine	11.1	11.0	10.4	10.4	10.8	11.4	10.5	10.3
Shortening	18.5	18.6	18.5	21.2	22.8	22.0	21.3	21.4
Lard (direct use)	2.5	2.5	2.1	2.1	1.8	1.7	1.8	1.7
Edible tallow (direct use)	1.0	1.3	2.1	1.7	1.9	1.8	1.0	0.8
Salad & cooking oils	21.8	21.8	23.5	19.8	23.5	24.1	25.2	25.7
Selected fresh fruits 3/	83.8	83.9	88.8	88.2	86.7	92.5	97.8	93.4
Citrus	24.1	23.9	28.3	23.2	22.6	25.8	25.5	25.6
Apples	16.5	17.0	17.7	17.9	16.8	17.5	20.4	18.1
Other noncitrus	43.1	43.0	42.7	47.1	47.3	49.2	51.8	49.7
Canned fruit 7/	9.1	9.4	8.2	8.3	8.4	8.7	8.8	8.8
Frozen fruit	2.9	2.9	2.9	3.0	3.3	3.6	3.9	3.8
Dried fruit	2.5	2.8	2.9	3.0	2.7	3.0	2.7	2.9
Selected fresh vegetables 8/	71.2	75.0	74.6	79.1	79.2	84.6	89.0	89.8
Selected vegetables for processing 3/ 9/	100.3	98.5	100.2	108.7	104.7	103.4	103.7	100.7
Tomatoes for processing 9/ 10/	59.3	60.1	60.8	68.4	63.1	63.4	64.6	61.0
Cucumbers for pickling 9/	5.7	5.7	5.8	5.8	5.8	5.3	5.1	5.2
Other vegetables for canning 9/ 11	20.7	19.2	19.0	17.0	18.7	19.0	17.3	16.6
Vegetables for freezing 9/ 12/	14.7	13.6	14.6	17.5	17.1	15.8	16.7	17.9
White potatoes								
Fresh	43.8	44.8	47.9	46.8	44.7	47.6	46.5	52.4
Frozen	18.9	19.5	19.4	20.2	22.0	23.0	22.8	21.9
Canned	1.1	1.2	1.2	1.1	1.2	1.1	1.1	1.1
Dehydrated	1.5	1.4	1.4	1.4	1.6	1.5	1.5	1.4
Chips & shoestrings	4.1	4.2	4.4	4.4	4.3	4.5	4.3	4.2
Sweetpotatoes 9/	4.8	5.5	4.6	5.0	5.4	4.5	4.5	4.4
Grains								
Wheat flour 13/	115.8	116.7	117.4	118.1	123.3	123.5	127.1	127.5
Rice	11.0	11.8	9.7	8.6	9.1	11.6	13.4	14.3
Pasta 14/	10.3	10.3	10.6	11.0	11.3	11.6	11.9	12.2
Caloric sweeteners 15/ 16/	124.9	127.8	130.4	129.7	132.8	133.5	132.8	133.9
Sugar (refined) 17/	79.4	73.6	71.0	67.6	63.4	60.8	62.4	62.4
Corn sweeteners (dry weight) 15/ 18/	43.5	48.2	52.6	58.8	65.6	67.5	69.0	70.1
Low-calorie sweeteners 19/	8.2	9.5	12.9	15.8	18.1	18.5	19.0	--
Other								
Coffee	7.7	7.6	7.6	7.5	7.6	7.6	7.6	7.6
Cocoa (chocolate liquor equiv.)	2.9	3.0	3.2	3.4	3.7	3.8	3.9	4.0
Peanuts (shelled)	5.5	5.9	5.9	6.0	6.3	6.4	6.3	6.8
Dry edible beans, peas, 9/	5.3	6.4	6.4	5.0	7.0	6.6	5.0	5.7
Soft drinks (gal.)	27.1	26.9	26.9	27.2	30.4	31.9	31.6	31.3
Citrus juice (gal.)	4.8	5.1	5.6	4.8	5.2	5.6	5.3	5.3

1/ Quantity in pounds, retail weight unless otherwise stated. Data on calendar year basis except fresh citrus fruits, apples, peanuts, potatoes, sweetpotatoes, & rice, which are on a crop-year basis. 2/ Preliminary. 3/ Total may not add because of rounding. 4/ Plain & flavored. 5/ 1% and 2%, buttermilk, and flavored drinks. 6/ Heavy cream, light cream, & half & half. 7/ Excludes apples, applesauce, cranberries, pineapples, & citrus sections. 8/ Includes asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, onions, and tomatoes. 9/ Farm weight. 10/ Used in such processed products as ketchup, canned tomatoes, tomato paste, & tomato puree. 11/ Includes asparagus, carrots, green peas, snap beans, & sweet corn. 12/ Includes asparagus, broccoli, carrots, cauliflower, green peas, snap beans, and sweet corn. 13/ White, whole wheat, semolina, & durum flour. 14/ Revised. 15/ Dry weight equivalent. 16/ Includes edible syrups & honey. 17/ Beginning 1982, includes small amount of refined sugar contained in imported blends & mixtures, including sucrose-dextrose blends, sugar-sweetened tea mixes, & flavored syrups in consumer size containers. 18/ High fructose, glucose, & dextrose. 19/ Sugar sweetness equivalent. Assumes saccharin is 300 times as sweet as sugar; & aspartame, 200 times as sweet as sugar. -- = not available.

Information contact: Judy Jones Putnam (202) 786-1870.

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